# Water Resources Data
# Wisconsin
# Water Year 1986

I 19.53/2:WI-86-1

ORIGINAL

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-86-1
Prepared in cooperation with the State of Wisconsin
and with other agencies

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# CALENDAR FOR WATER YEAR 1986

## 1985

### OCTOBER

| S | M | T | W | T | F | S |
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### NOVEMBER

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### DECEMBER

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## 1986

### JANUARY

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### MARCH

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### APRIL

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### JUNE

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### JULY

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### SEPTEMBER

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March 3 1849

# Water Resources Data Wisconsin

## Water Year 1986

by B.K. Holmstrom, P.A. Kammerer, Jr., and R.M. Erickson

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-86-1
Prepared in cooperation with the State of Wisconsin
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II

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Village of Oconomowoc Lake
Menominee Indian Tribe of Wisconsin
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District of Powers Lake
Green Lake Sanitary District
Lac La Belle Management District
Okauchee Lake Management District
Morris Lake Management District
Wolf Lake Management District
Park Lake Management District
Wind Lake Management District
Town of Sand Lake
Wood County Board

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U.S. Geological Survey
6417 Normandy Lane
Madison, Wisconsin 53719

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# PREFACE

This volume of the annual hydrologic data report of Wisconsin is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by a number of people who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data were collected, computed and processed from area field offices. Technicians-in-charge of the field offices are:

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Water-resources data for the 1986 water year for Wisconsin include records of streamflow at gaging stations, partial-record stations, and miscellaneous sites; records of chemical, biological, and physical characteristics of surface and ground water. Records of chemical analysis of precipitation, surface and ground water associated with acid deposition are included. In addition water levels in observation wells are reported. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and local agencies and for other Federal agencies in Wisconsin.

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# GAGING STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data (c) chemical, (d) discharge, (g) gage height, (m) microbiological, (r) radiochemical, (s) sediment, (t) water temperature]

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## INTRODUCTION

Water-resources data for Wisconsin for the 1986 water year include records of streamflow at gaging stations, partial-record stations, and miscellaneous sites; stage and contents of lakes and reservoirs; chemical, physical, and biological characteristics of surface and ground water; and water levels in observation wells. Records from several stations in bordering states are also included. This report contains discharge records from 106 gaging stations and peak stage and discharge from 104 crest-stage stations; stage for 38 lakes and contents for 24 reservoirs; water-quality data from 20 streams, from 31 lakes, and from 165 wells; and water-level records from 64 observation wells. Various discharge, stage, precipitation, ground-water level, and water quality data are collected at four acid-deposition sites in northern Wisconsin. Additional water data were collected at various sites not involved in the systematic data-collection program, and are published in this report as miscellaneous measurements.

The Water Resources Division of the U.S. Geological Survey, in cooperation with local, State and Federal agencies, obtains a large amount of data pertaining to the water resources of Wisconsin each year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Wisconsin." This series of annual reports for Wisconsin began in the 1961 water year with streamflow data, the 1964 water year with water-quality data, and the 1971 water year with ground-water data. Beginning with the 1975 water year, streamflow, water quality, and ground water data for each State were published in present format. These annual reports are for sale, in paper copy or microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Wisconsin were published in U.S. Geological Survey Water-Supply Papers. Records of stream discharges and of water levels in lakes and reservoirs were published annually through 1960 and then for the 5-year periods 1961-65 and 1966-70 in the series "Surface-Water Supply of the United States". Chemical-quality, water-temperature, and suspended-sediment data were published annually, from 1941 to 1970, in the series "Quality of Surface Waters of the United States". Records of ground-water levels were published annually from 1935 to 1974, in the series "Ground-Water Levels in the United States". The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225.

Additional information, including current prices for ordering specific reports, may be obtained from the District Chief at the address given on the back of the title page, or by telephone (608)274-3535.

## COOPERATION

The U.S. Geological Survey and the State of Wisconsin have worked under cooperative agreements since 1913 collecting streamflow data, since 1955 collecting water-quality data, and since 1964 collecting ground-water level data. Agencies that worked cooperatively with the Survey during this year collecting data are:

Wisconsin Department of Natural Resources, C. D. Besadny, secretary.

U.S. Army Corps of Engineers.

Wisconsin Department of Transportation, Lowell B. Jackson, secretary, and S. W. Woods, chief bridge engineer.

The University of Wisconsin-Extension, Geological and Natural History Survey, M. E. Ostrom, state geologist and director.

Southeastern Wisconsin Regional Planning Commission, K. W. Bauer, executive director.

Dane County Department of Public Works, Kenneth J. Koscik, director.

Dane County Regional Planning Commission, Charles Montemayor, executive director.

City of Madison, A. E. Milke, city engineer.

City of Medford, Arthur Salzwedel, mayor.

City of Middleton, Dan Ramsey, mayor.

City of Beaver Dam, John Omen, mayor.

City of Galena, IL, Frank L. Einsweiler, mayor.

City of Thorp, Dave M. Keating, mayor.

Madison Metropolitan Sewerage District, James L. Nemke, chief engineer and director.

Madison Water Utility, Gary Graham, manager.

Milwaukee Metropolitan Sewerage District, Harold Cahill, Jr., executive director.

Illinois Department of Transportation.

U. S. Bureau of Indian Affairs.

Village of Slinger.

Village of Oconomowoc Lake.

Menominee Indian Tribe of Wisconsin.

Lac Courte Oreilles Governing Board.

Delavan Lake Sanitary District, Kevin L. MacKinnon.

District of Powers Lake.

Green Lake Sanitary District, Daniel R. Simonson.

Morris Lake Management District.

Okauchee Lake Management District.

Park Lake Management District.

Wind Lake Management District.

Town of Sand Lake.

Wolf Lake Management District.

Wood County Board.

The following organizations aided in collecting streamflow records:

Wisconsin Valley Improvement Co., Lake Superior District Power Co., Wisconsin-Michigan Power Co., Wisconsin Public Service Corp., Northern States Power Co., Dairyland Power Cooperative, Wisconsin Power and Light Co., Nekoosa Papers Inc., Wisconsin Electric Power Co., Wisconsin River Power Co., Scott Paper Co., and Milwaukee County Park Commission.

Organizations that supplied data are acknowledged in station descriptions.

## SUMMARY OF HYDROLOGIC CONDITIONS

### Streamflow

Runoff throughout Wisconsin was above normal during the 1986 water year. Average runoff for the year varied from approximately 101 to 280 percent of the long-term average (fig. 1). The Grant River basin in southwestern Wisconsin exhibited the lowest runoff (101 percent) compared to its long-term average runoff (1935-86). The Crawfish River basin in southeastern Wisconsin shows the greatest runoff (280 percent) compared to its long-term average (1932-86). The comparison of the monthly and annual mean discharges for the 1986 water year to a 71-year base period at three gaging stations is shown in figure 2.

Average runoff for selected gaging stations throughout the State draining about 40,200 square miles was 10.4 inches for the 30-year period from 1951-80. Average runoff for these stations was 15.8 inches for the 1986 water year, or approximately 152 percent above the average runoff for the 1951-80 period. Largest runoff values occurred in streams in eastern Wisconsin draining into Lake Michigan. These runoff values for the 1986 water year were up to 225 percent above average. The Rock River basin in southeastern Wisconsin had runoff values two times the average runoff for the 1951-80 period.

1986 was the ninth consecutive water year that streamflow had been above normal. Streamflow in Wisconsin has not been normal or below normal since the drought of 1976-77. Above normal precipitation in October, November, August, and September and snowmelt and precipitation in early spring accounted for peaks at over 50 different gaging stations that exceeded the 2-year recurrence interval.

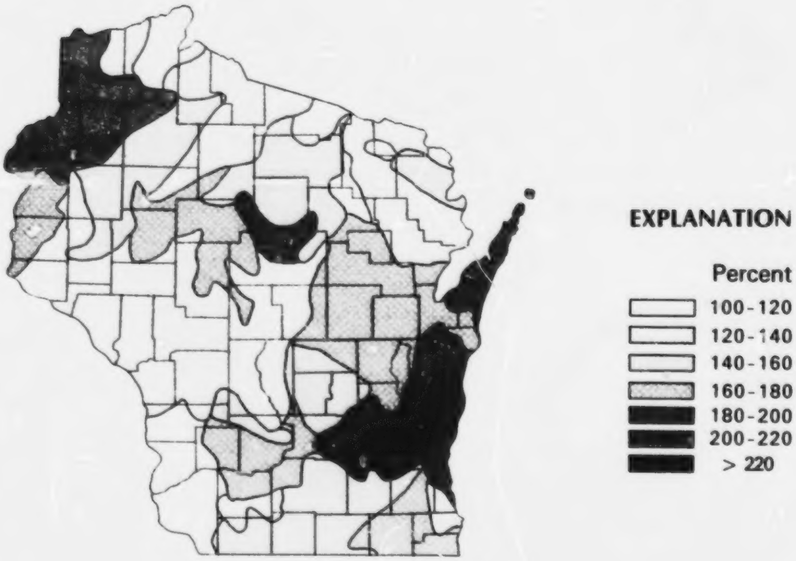

Figure 1. 1986 runoff as percent of long-term average runoff.

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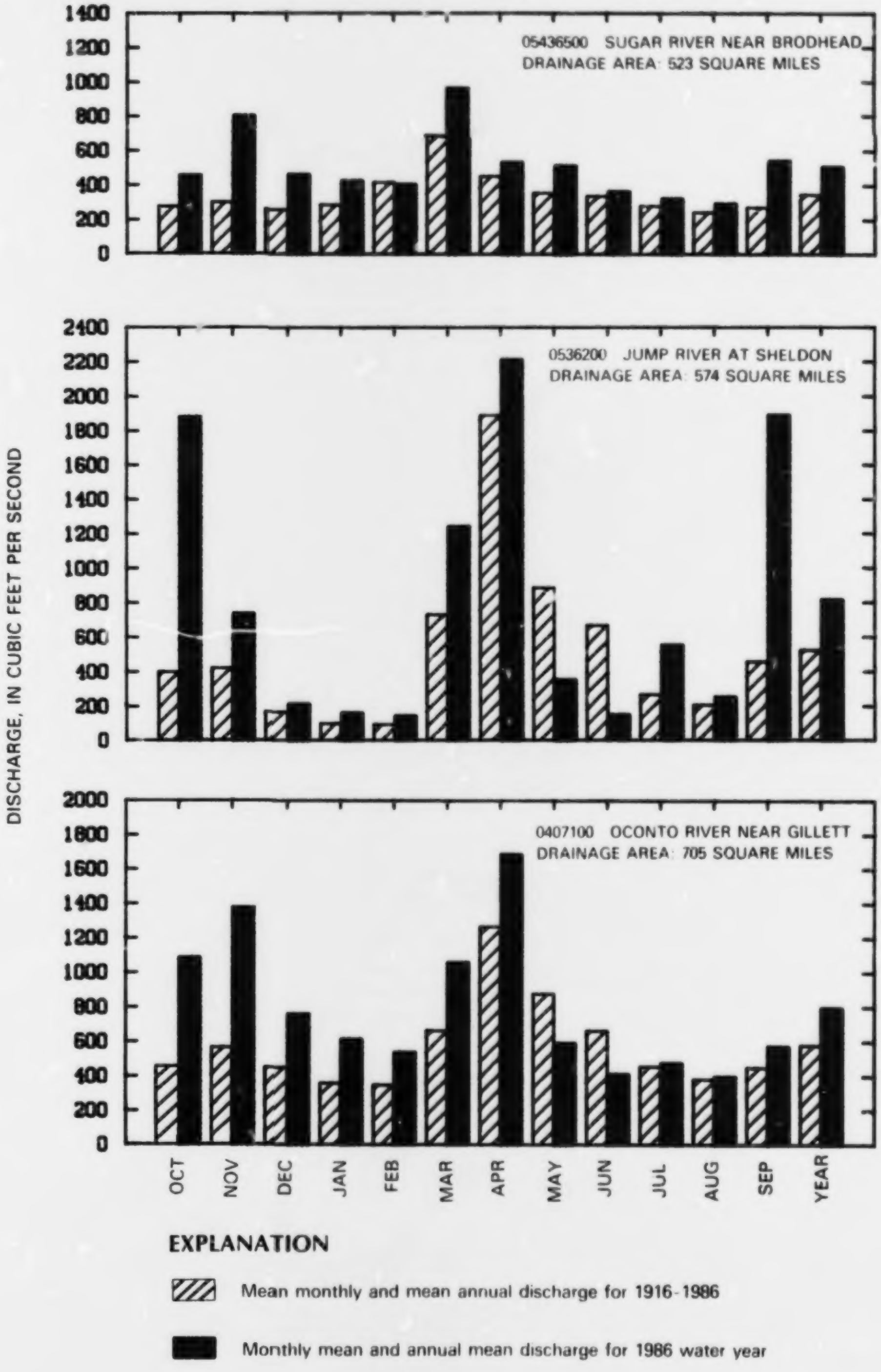

Figure 2. Comparison of discharge at representative gaging stations during 1986 water year with discharge for 1916–86.

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The following is a description of the seasonal variation in streamflow in the State.

## October - December

Above normal precipitation with high soil moisture conditions in October and November caused above normal runoff for the October through December period. Highest average streamflows occurred on streams in eastern Wisconsin flowing into Lake Michigan (which were four to six times greater than normal) and in the Crawfish River basin in southeastern Wisconsin (approximately 660 percent greater than normal).

## January - March

Average flows for January through March period were above normal for most of the State and ranged from 80 percent of normal in southwestern Wisconsin to 230 percent in the Crawfish River basin in southeastern Wisconsin. A combination of snowmelt and precipitation produced peaks at several gaging stations in southeastern and east-central Wisconsin with recurrence intervals exceeding five years. These peaks are listed in the following table:

| Station number | Station name | Date | Peak discharge ($ft^3/s$) | Recurrence interval (years) |
|---|---|---|---|---|
| 04073500 | Fox River at Berlin | Mar. 26 | 4,960 | 6 |
| 04079000 | Wolf River at New London | Mar. 29 | 10,200 | 6 |
| 04087233 | Root River Canal near Franklin | Mar. 10 | 1,120 | 7 |
| 05425500 | Rock River at Watertown | Mar. 24 | 4,030 | 18 |
| 05426000 | Crawfish River at Milford | Mar. 24 | 3,740 | 7 |
| 05430500 | Rock River at Afton | Mar. 27 | 9,270 | 6 |

## April - June

Average flows for April through June period ranged from 51 percent of normal in the upper Black River basin in west central Wisconsin to 204 percent of normal in the St. Croix River basin in northwestern Wisconsin. Average flows started out above normal in April and declined to below normal conditions in late June, which was caused by below normal precipitation in late May and June. The overall average flows for this period were about normal. There were numerous peak discharges in northern Wisconsin that exceeded the 5-year recurrence interval. These peaks were caused by above normal snowfall and snowmelt runoff in early April along with thunderstorms in mid-May and late June and are listed in the following table:

| Station number | Station name | Date | Peak discharge ($ft^3/s$) | Recurrence interval (years) |
|---|---|---|---|---|
| 04025500 | Bois Brule River near Brule | May 13 | 976 | 6 |
| 04027000 | Bad River near Odanah | Apr. 1 | 11,500 | 5 |
| 04063700 | Popple River near Fence | Apr. 7 | 1,100 | 9 |
| 04066003 | Menominee River below Pemene Creek near Pembine | Apr. 7 | 18,400 | 5 |

| | | | | |
|---|---|---|---|---|
| 04067500 | Menominee River near McAllister | Apr. 8 | 22,300 | 6 |
| 04077400 | Wolf River near Shawano | Apr. 1 | 4,440 | 25 |
| 04087088 | Underwood Creek at Wauwatosa | June 27 | 1,460 | 9 |
| 05340500 | St. Croix River at St. Croix Falls | May 14 | 37,000 | 8 |
| 05356500 | Chippewa River near Bruce | Apr. 1 | 17,500 | 17 |
| 05360500 | Flambeau River near Bruce | Apr. 2 | 17,600 | 26 |
| 05362000 | Jump River at Sheldon | Apr. 1 | 14,000 | 7 |
| 05369500 | Chippewa River at Durand | Apr. 4 | 68,500 | 6 |
| 05395000 | Wisconsin River at Merrill | Apr. 1 | 21,900 | 10 |

## July - September

Above normal precipitation from July through September caused average flows that were above normal for most of the State. September's statewide average rainfall exceeded 8.5 inches that approached Wisconsin's record September rainfall of 9.0 inches, which occurred in 1881 (Wisconsin State Journal, 1986). Average streamflows were four to five times greater than normal in the eastern tributaries to Lake Michigan. The Crawfish River in southeastern Wisconsin had average flows that were about seven times higher than normal.

A severe thunderstorm in the Milwaukee metropolitan area occurred on August 6 and caused record flooding that resulted in two deaths and massive property damage (Gebert, 1987). The total 24-hour rainfall was 6.84 inches; this was estimated to be about a 300-year event by the Southeastern Wisconsin Regional Planning Commission (SEWRPC, 1986). The storm produced a peak discharge of 10,600 $ft^3/s$ on the Kinnickinnic River at South 11th Street at Milwaukee, which was estimated to exceed a 500-year flood. Flood waters were the cause of two deaths in this basin. Total property damage in the Milwaukee area as a result of the August 6 floods was estimated to be about 21 million dollars by the Wisconsin Department of Natural Resources (Wisconsin DNR, 1986).

A number of gaging stations recorded floods that exceeded the 5-year recurrence interval as a result of August thunderstorms and the combination of precipitation and saturated soils in September. These peak discharges are listed in the following table:

| Station number | Station name | Date | Peak discharge ($ft^3/s$) | Recurrence interval (years) |
|---|---|---|---|---|
| 04087088 | Underwood Creek at Wauwatosa | Aug. 6 | 1,350 | 8 |
| 04087120 | Menomonee River at Wauwatosa | Aug. 6 | 10,600 | 75 |
| 04087159 | Kinnickinnic River at South 11th Street at Milwaukee | Aug. 6 | 10,600 | >500 |
| 04087204 | Oak Creek at South Milwaukee | Aug. 6 | 1,140 | 55 |
| 05381000 | Black River at Neillsville | Sept. 22 | 28,100 | 17 |
| 05382000 | Black River at Galesville | Sept. 24 | 43,600 | 14 |
| 05393500 | Spirit River at Spirit Falls | Sept. 27 | 2,970 | 13 |
| 05398000 | Wisconsin River at Rothschild | Sept. 28 | 46,700 | 13 |
| 05400760 | Wisconsin River at Wisconsin Rapids | Sept. 29 | 59,000 | 17 |

| | | | | |
|---|---|---|---|---|
| 05402000 | Yellow River at Babcock | Sept. 22 | 8,640 | 13 |
| 05404000 | Wisconsin River near Wisconsin Dells | Sept. 30 | 53,400 | 9 |

## References Cited

Gebert, W.A., 1987, Flood of August 6, 1986, in Milwaukee, Wisconsin Metropolitan Area, National Water Summary 1986, U.S. Geological Survey Water-Supply Paper 2325.

Southeastern Wisconsin Regional Planning Commission, 1986, Major storm event causes flooding and local storm water drainage problems in Southeastern, Southeastern Wisconsin Regional Planning Newsletter, Vol. 26, No. 6, Nov.-Dec. 1986.

Wisconsin Department of Natural Resources, 1986, Interagency Hazard Mitigation Report, FEMA-770-DR-WI, August 1986, 20 p.

Wisconsin State Journal, "September rain near 9"," September 30, 1986.

## Water Quality

Dissolved solids concentrations represent the total dissolved mineral content of water. Dissolved solids concentrations in rivers and streams change with changes in runoff. Concentrations are generally highest during base flow, when streamflow is ground-water runoff and decrease as base flow is diluted by runoff from snowmelt and precipitation.

Dissolved solids concentrations measured at selected National Stream-Quality Accounting Network (NASQAN) stations and a Hydrologic Benchmark Network (HBMN) station during the 1986 water year reflect runoff conditions in the State. Dissolved solids concentrations measured at these stations during the year are compared to monthly mean concentrations for the period of record in figure 3.

Dissolved-solids concentrations were generally less than long-term monthly mean concentrations throughout the State because of above-normal runoff. Runoff at the Popple River near Fence (HBMN station) was only 114 percent of normal for the water year, but runoff in November, January, and April was 200, 154, and 151 percent of normal, respectively, causing dissolved solids concentrations less than long-term monthly means. Runoff in August was 71 percent of normal, and the dissolved-solids concentration measured during the month was close to the mean concentration. Dissolved-solids concentrations at the NASQAN stations Milwaukee River at Milwaukee and Manitowoc River at Manitowoc were considerably below long-term means through March. Runoff in eastern Wisconsin during this period was considerably above normal. Later in the water year, departure from average runoff decreased and dissolved solids concentrations approached long-term means. Runoff at the NASQAN station on the Black River near Galesville was 131 percent of normal for the water year and dissolved-solids concentrations were close to long-term mean concentrations. Runoff at this station was below normal for the period April-June, and dissolved-solids concentrations measured during this period exceeded the monthly mean.

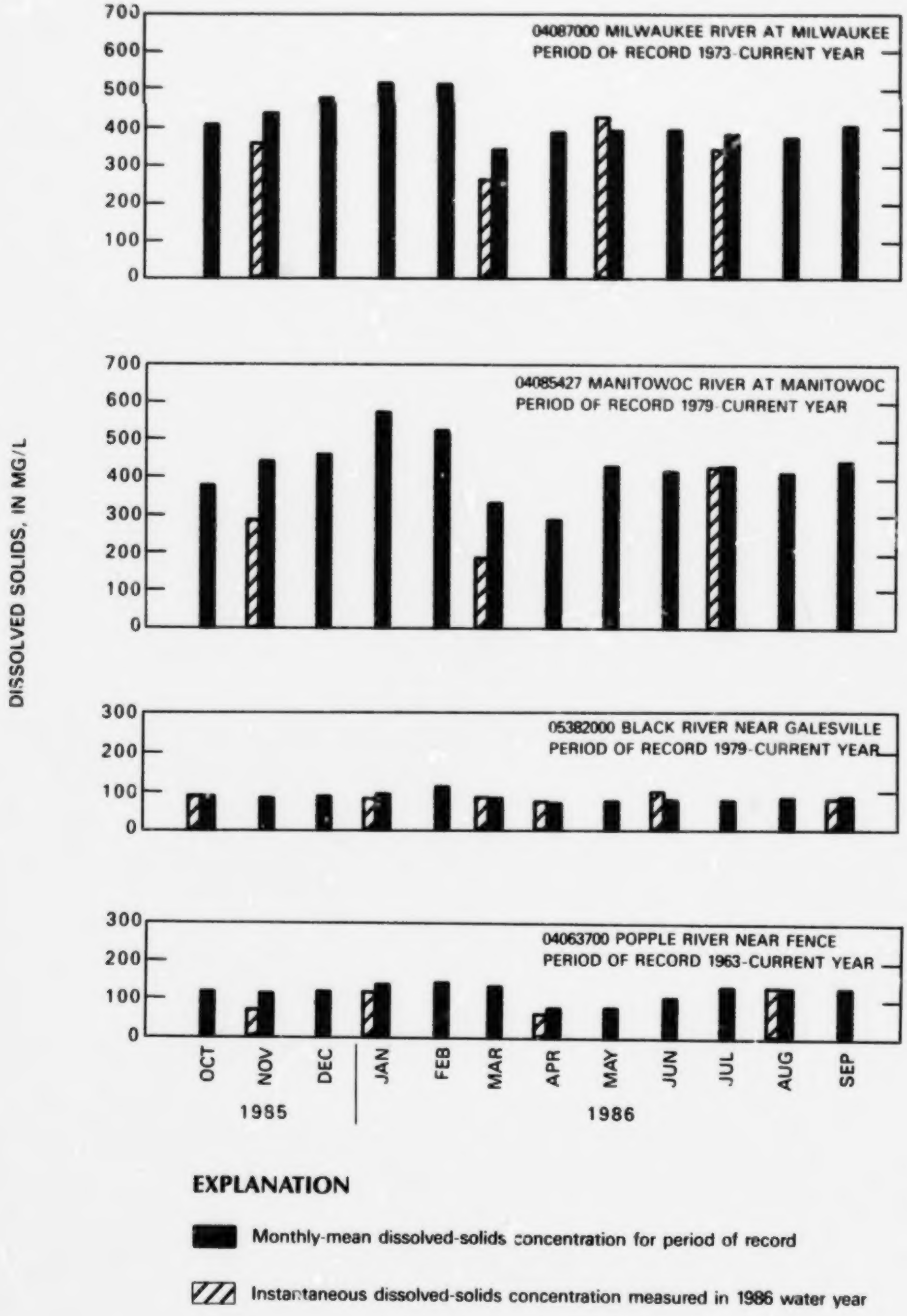

**Figure 3.** **Comparison of dissolved-solids concentrations in streams during 1986 water year with monthly means.**

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Maps showing the seasonal ground-water trends for the year (fig. 3) are based on water-level data from 27 shallow-aquifer wells, each having at least 15 years of record. Water-level measurements from each well are grouped so that FALL consists of measurements from September through November 1985; WINTER consists of measurements from December 1985 through February 1986; SPRING consists of measurements from March through May 1986; and SUMMER consists of measurements from June through August 1986. Mean seasonal water levels for 1986 were compared to the long-term mean seasonal water levels. The 1986 water level was considered normal if it was within one-half of the standard deviation of the long-term mean.

Three consecutive years of above normal ground-water levels (1983-85) occurred throughout most of Wisconsin and the trend continued in 1986. The only notable exceptions were areas along some of the major river valleys where ground-water levels were normal.

Ground-water levels in eastern Wisconsin have commonly been normal or below normal during the past several years. This is not a reflection of climatic conditions, but is probably due to municipal pumping in the Green Bay and Milwaukee areas.

Ground-water levels in 14 of the 27 wells were above normal throughout the year, and water levels in nine of these were more than one standard deviation above the long term mean for all four seasons.

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Program provides data from river basins where hydrologic conditions are relatively unaffected by man's activities and are expected to remain unaffected within the foreseeable future.

National Stream-Quality Accounting Network was designed by the U.S. Geological Survey to meet information needs of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad monitoring aspects have been incorporated in the network design. The network is divided into the river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are: (1) to assess the areal variability of water-quality conditions, nationwide, on an annual basis; and (2) to assess long-term changes in stream quality.

The U.S. Geological Survey completed a nation-wide review of the NASQAN program during 1986. This review is expected to result in a change in emphasis in the program and a net reduction, nationally, in the number of stations in the network. The original accounting objectives of the program will be retained only for a reduced number of stations that account for the quality of water leaving the continent or entering the Great Lakes. To meet the accounting objectives, preference will be given to stations where statistically significant water-quality changes have been detected or where changes in upstream land uses are anticipated.

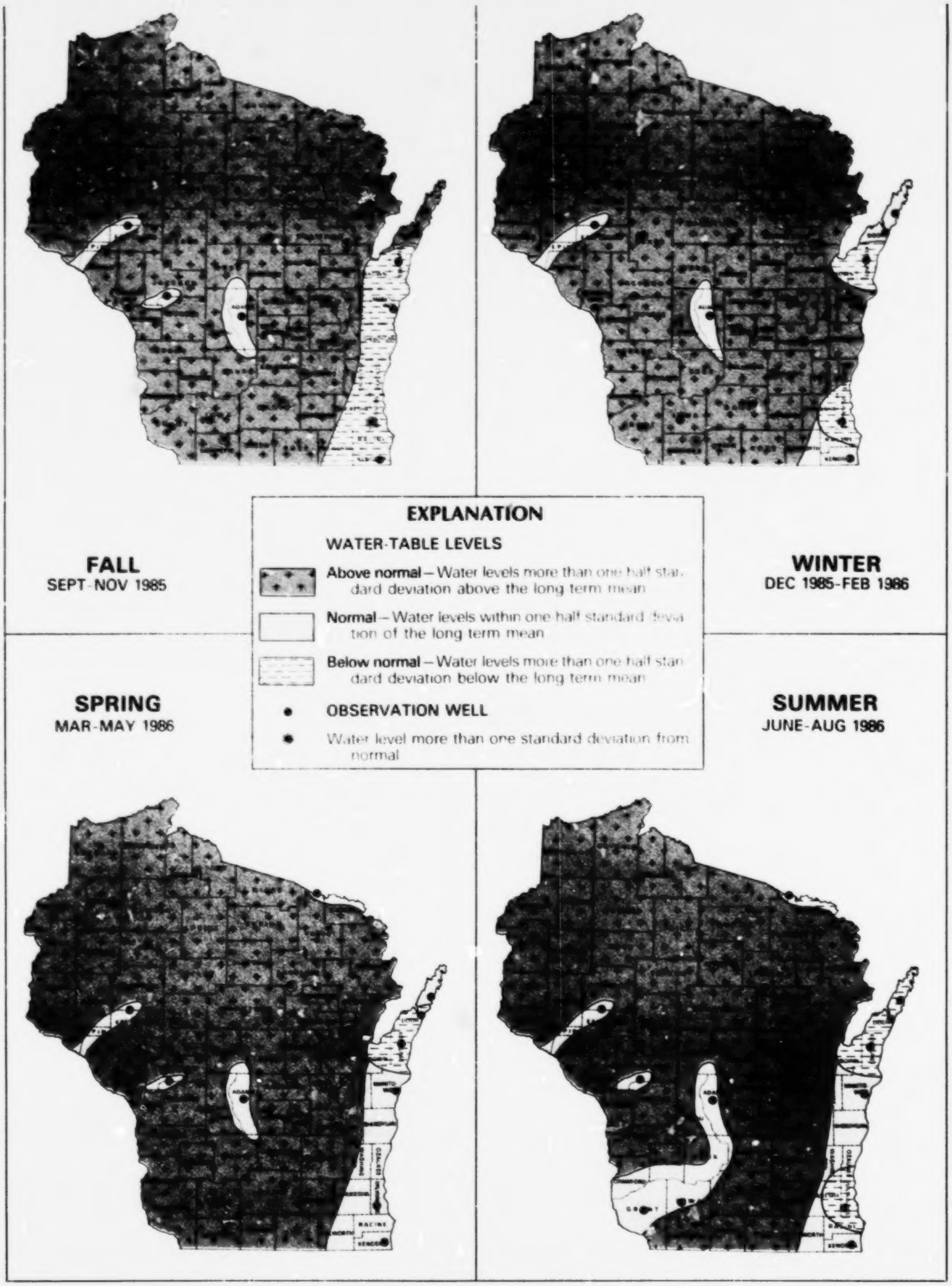
FALL
SEPT-NOV 1985
WINTER
DEC 1985-FEB 1986
SPRING
MAR-MAY 1986
SUMMER
JUNE-AUG 1986
EXPLANATION
WATER-TABLE LEVELS
Above normal—Water levels more than one half standard deviation above the long term mean
Normal—Water levels within one half standard deviation of the long term mean
Below normal—Water levels more than one half standard deviation below the long term mean
OBSERVATION WELL
Water level more than one standard deviation from normal

Figure 4. Relation of seasonal water-table levels to long-term means.

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Increased emphasis will be placed on trend detection and transport of dissolved and suspended materials at these remaining accounting stations and any other stations retained in the network. Other stations retained in the network will be selected on the basis of hypotheses concerning the causes of existing or potential trends that the station is intended to identify. This new emphasis will require more intensive sampling (event-related and fixed-frequency sampling) and more chemical analyses of suspended materials, thus increasing per station costs. These increased costs are to be met by the reduction in network size rather than by increased funding of the program. Some reduction in network size began in the 1987 water year; major changes in the size and emphasis of the network are expected to be planned and implemented through the 1989 water year.

Radiochemical Surveillance Network of water-quality stations, representing major drainage basins in the conterminous United States, where samples are collected regularly for radioisotope analysis.

## EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are from the 1986 water year that began October 1, 1985, and ended September 30, 1986. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for precipitation and surface and ground water, and ground-water-level data. Data collection as part of cooperative studies of acid deposition in Wisconsin, which includes most of the data type just mentioned, are tabulated in a separate section of the report. The explanations of various types of data given in the remainder of this section apply to these records as well. Figure 5 shows major surface-water drainage basins and an index of hydrologic records. The locations of the stations and wells where the data were collected are shown in basin location maps and figures 6, 7, and 8.

The following sections of introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for the station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order number" is used for most surface-water stations or streams and a unique 15-digit number is used for lakes and wells.

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. No station-number distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight- or nine- digit number for each station, such as 04087000 or 054310157, which appears just to the left of the station name, includes the two-digit Part number "04" or "05" plus the six- or seven digit downstream-order number "087000" or "4310157". The Part number designates the major river basin; for example, records in this report are in Part 04 (St. Lawrence River basin) or Part 05 (Upper Mississippi River basin).

In some special cases, stations on streams may be identified with the numbering system used for ground-water and lake-data sites described in the following paragraph. This is generally done only for special purpose short-term stations where station density precludes convenient assignment of downstream order numbers.

## Numbering System for Ground-Water and Lake Data Sites

Wells, springs, and sites on lakes where data are collected are identified by a unique 15-digit number that is a concatenation of the site's latitude, longitude, and a two-digit sequence number. The sequence number is used to distinquish between sites located at the same latitude-longitude designation. The site identification number is permanently assigned to the site; actual latitude and longitude of the site are subject to update and are stored separately. Each ground-water site is also identified by a local number based on the cadastral-survey system of the U.S. Government. The number consists of an abbreviation of the county name, the township, range and section, and a four-digit number assigned to the well.

## Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained from a continuous stage-recording device by which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained from a continuous stage-recording device, but need not be. Because daily mean discharges commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained by discrete measurements, without using a continuous stage-recording device. Two types of surface-water partial-record stations are operated: (1) crest-stage partial-record stations, for which maximum discharge is recorded; and (2) miscellaneous stations, for which periodic discharge measurements and/or limited water-quality analyses are made. These types of stations are each presented separately in this report.

## Data Collection and Computation

The basic data collected at complete-record gaging stations include stage and discharge measurements of streams, and stage, surface area, and content measurements of lakes and reservoirs. Factors affecting stage-discharge relationships, weather records, and other information supplement the basic data used to determine daily flow. Records of stage are obtained by reading a nonrecording gage, from a continuous graph, or from a tape punched at selected intervals on a water-stage recorder. Measurements of discharge are made with a current meter by using methods described in "U.S. Geological Survey Techniques of Water Resources Investigations" listed in "Publications on techniques of water-resources investigations."

Rating tables of stream stage and corresponding discharges are prepared from stage-discharge relationship curves. Extended-rating curves, based on step-backwater techniques, velocity-area studies, logarithmic plotting, and indirect measurements of peak discharge are used to estimate discharges greater than those measured. Daily mean discharges are computed from gage heights and rating tables, and the monthly and yearly means are computed from the daily figures. If the stage-discharge relationship varies due to changes in the control, such as aquatic growth, debris, or scour and fill, daily mean discharge is computed by a shifting-control method in which correction factors, based on individual discharge measurements and notes by observers, are used when the gage heights are applied to the rating tables.

The slope method is used to compute discharge at stream-gaging stations where backwater from lakes or reservoirs, tributary streams, or other sources affect the stage-discharge relationship. The rate of change of stage is used to compute discharge at stations where the stage-discharge relationship is affected by rapid changes in stage. When ice conditions at stream-gaging stations affect the stage-discharge relationship, gage-height records, winter discharge measurements, temperature and precipitation data, and comparable records of discharge for nearby stations are used to compute discharge. At gaging stations where gage-height records are faulty or non-existent for some periods, the daily discharges are estimated based on the recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for nearby stations.

Descriptions of the stations and tabulations of data are included in this report. A table showing daily, monthly, and yearly discharges is given for each gaging station on a stream or canal. A table showing the monthly summary of stage is given for gaging stations on lakes.

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information such as station location, period of record, average discharge, historical extremes, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments that follow clarify information presented under the various headings of the station description. These headings may include all or some of the following:

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages were provided by the U.S. Army Corps of Engineers or other agencies.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of map available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect and revisions are printed in later reports. All the reports in which revisions have been published for the station and the water years to which the revisions apply are listed under this heading. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see definition of terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information about the accuracy of the records, special methods of computation, conditions that affect natural flow at the station and, possibly, other pertinent items.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges. Unless otherwise qualified, the maximum discharge is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Information concerning major floods or unusually low flows that occurred outside the stated period of record is included here. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similiar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence of peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although it is rare, occasionally the records of a discontinued gaging station may need revision. Because there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations, who obtained the record from previously published data reports, may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

RATING TABLE.--Skeleton rating tables allow an approximation of daily gage heights from daily discharges. The tables also indicate the range in stage resulting from any given range in discharge.

The data presented for most gaging stations on lakes include a description of the station and a monthly summary table of stage.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are ommitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. The figures shown in the yearly summary below the monthly summary are the appropriate discharges for the calendar and water years.

Data collected at crest-stage partial-record stations are given in a table of annual maximum stages and discharges that follows the information for continuous-record sites. The crest-stage partial-record stations table is followed by a list of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for special reasons are called measurements at miscellaneous sites.

## Identifying Estimated Daily Discharge

Estimated daily-discharge values are identified by listing the dates of the estimated record in the REMARKS paragraph of the station description.

## Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 $ft^3/s$; to the nearest tenth between 1.0 and 10 $ft^3/s$; to the nearest whole number between 10 and 1,000 $ft^3/s$; and to 3 significant figures for more than 1,000 $ft^3/s$. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and misce magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, or changes in contents or reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents.

### Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Wisconsin District office. Also, most of the daily mean discharges are in computer-readable form and have been statistically analyzed. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

## Records of Surface-Water Quality

Records of stream-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of stream-water quality nearly always requires corresponding discharge data. Water samples from lakes are collected at locations identified by latitude and longitude; the depth at which the sample was collected is given with each analysis. Records of surface-water quality in this report include a variety of types of data and measurement frequencies.

### Classification and Arrangement of Records

The water-quality data collected at surface-water sites fall into two general classifications. Continuous-record stations are sites where data are collected on a regularly scheduled basis as part of a monitoring program or interpretive investigation. Water-quality records for these stations accompany stream-discharge or lake-stage records, where available, in the Surface Water Records section of this report. Water-quality partial-record stations are sites where more limited water-quality data are collected. These data include water temperature and specific conductance measurements made at gaging station visits and other reconnaissance data collected for special purposes. Water-quality data for water-quality partial-record stations appear together at the end of the Surface Water Records section.

### On-site Measurements and Sample Collection

In obtaining water-quality data, care is taken to assure that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made on site when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in "U.S. Geological Survey Techniques of Water-Resources Investigations," listed in "Publications on techniques of water-resources investigations."

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections using depth-integrating samplers to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. Water quality in lakes may differ with depth and laterally at a particular depth depending on thermal stratification and other physical and biological factors.

Chemical-quality data published in this report are considered to be representative values for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

For chemical-quality stations equipped with recording monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon values recorded. More detailed records (hourly values) may be obtained from the U.S.G.S. Wisconsin District Office.

## Sediment

Suspended-sediment concentrations are determined on samples collected with depth integrating samplers from one or more verticals in the cross section, or on a single sample taken manually or with an automatic sampler at a fixed point. For fixed-point samples, a coefficient is applied to correct for differences between fixed-point and flow-integrated samples.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently than during stable periods. The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Suspended-sediment discharges less than 0.005 tons/day are reported as 0.

Suspended-sediment samples collected periodically represent conditions only at the time of observations. However, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of suspended-sediment concentration and the particle-size distribution of the suspended sediment and bed material are included for some stations.

## Laboratory Measurements

Samples for suspended-sediment concentration and particle-size determination are analyzed by the U.S.G.S. Sediment Laboratory in Iowa City, Iowa. Chemical analyses, other than field measurements, are performed by the U.S.G.S. Central Laboratory System unless specified otherwise. Methods used in analyzing sediment samples and computing sediment records are given in "U.S. Geological Survey Techniques of Water-Resources Investigations" listed in "Publications on techniques of water-resources investigations."

## Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then following in sequence.

The concentrations of some constituents are given as less than some value; that value is the detection for the analytical method used for the analysis. Occasionally these values differ or an actual concentration is given that is less than a higher detection limit indicated for the constituent in another analysis. These differences are due to differences in analytical methods.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, pumping sediment sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximum and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates or check with the District Office to determine if updates were made.

The surface-water-quality records for water-quality partial-record stations are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

## Remark Codes

The following remark codes may appear with the water-quality data in this report:

| PRINTED OUTPUT | REMARK |
|---|---|
| E | Estimated value |
| > | Actual value is known to be greater than the value shown |
| < | Actual value is known to be less than the value shown |
| K | Results based on colony count outside the acceptance range (non-ideal colony count) |

Water-level data for 64 wells are given in this report. The location of these wells is shown on figure 6. These wells are part of a national network of observation wells, and the water-level data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers.

Data in this report represent natural water-table and artesian conditions in the principal aquifers of the State, except in the sandstone aquifer in southeastern Wisconsin where heavy municipal and industrial pumping is causing a continual decline in the water level. Water in this aquifer is under artesian pressure where confined by the overlying Maquoketa Shale.

Although records of water levels for 64 wells are presented in this report, water-level data are currently being collected for a total of 227 wells in Wisconsin through a cooperative program with the Wisconsin Geological and Natural History Survey (WG&NHS). Many federal, state, county and local agencies, as well as interested area residents, assist in this program by measuring and reporting water levels. All water-level data are placed in computer storage. Reports containing hydrographs, showing water-level changes in all of these wells, are periodically published by the WG&NHS.

The amplitude of water-level changes is typified by 10 well hydrographs in this report that show annual maximum and minimum water levels for the period of record.

## Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are consistently accurate and reliable.

Tables of water-level data are presented by county arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the heading. It is followed by the secondary identification number (the local number), an alphanumeric number, derived from the county, township-range location of the well, and a sequential number for the county.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the lsd above the National Geodetic Vertical Datum of 1929 and the height of the measuring point (MP) above or below the lsd is given in each well description. Water levels are normally reported to a hundredth of a foot. The absolute value of the depth to water may be in error by a few tenths of a foot, but the error in determining the net change in water level between successive measurements is normally only a hundredth or a few hundredths of a foot.

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well precedes the tabular data. The comments below clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; and the land owner's name.

AQUIFER.--This entry designates by name the primary aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, and use.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of casing, top of breather pipe, hole in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision dependent on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; daily lows are listed for every fifth day and at the end of the month (eom). For these wells the highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for these wells, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others.

Most methods of collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed in "Publications on techniques of water-resources investigations." The values reported in this report represent water-quality conditions at the time of sampling. Care is taken to assure that the water collected represents the geologic unit supplying water to the well. This is done by pumping the well for what is believed to be a sufficient length of time to flush out water that might have been contaminated by exposure to the material that comprise the well casing or distribution system.

### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County. No descriptive statements are given for ground-water-quality records; however, station number, local identifying number, geologic unit, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The discussion of detection limits and the list of remarks codes for surface-water-quality records also apply to ground-water-quality records.

## ACCESS OF WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established to process and store water data collected through the activities of the U.S. Geological Survey and to provide more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the District Office.

General inquires about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

Terms used in this report with reference to streamflow, water-quality, and other hydrologic data are defined below. For conversion of inch-pound units and International System (SI) units see the table on the inside of the back cover.

Acre-foot (acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot. It is the equivalent of 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Bacteria are microscopic, unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, and often clumped into colonies. Some bacteria cause disease; others perform essential roles in the natural recycling of materials such as decomposing organic matter into forms available for reuse by plants.

Fecal coliform bacteria are present in the intestines of warmblooded animals and are used to determine the sanitary quality of water. They are defined as those organisms that produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2° on FC culture medium. Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococci bacteria are also found in the intestines of warmblooded animals. Their presence in water is used to verify fecal pollution. They are characterized as gram-positive, spherical bacteria capable of growth in brain-heart infusion broth. They are defined as those organisms that produce red or pink colonies within 48 hours at 35° ± 1.0° on M-enterococcus culture medium. Their concentrations are expressed as number of colonies per 100 ml of sample.

Bed material is the unconsolidated material at the bottom of a streambed, lake, pond, reservoir, or estuary.

Biochemical oxygen demand (BOD) measures the quantity of dissolved oxygen, in milligrams per liter, used by microorganisms for the decomposition of organic matter.

Cfs-day is the volume of water produced by a flow of 1 cubic foot per second for 24 hours. It is the equivalent of 86,400 cubic feet, 1.9835 acre-feet, 646,000 gallons, or 2,447 cubic meters.

Control is a feature downstream from a gage that determines the stage-discharge relation at the gage. The control may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

*Cubic foot per second* (ft$^3$/s) represents a volume of 1 cubic foot of water passing a given point during 1 second and is the equivalent of 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

*Discharge* is the volume of fluid or mass of suspended sediment passing a given point in a given period of time.

*Mean discharge* (MEAN) is the arithmetic average of all daily mean discharges for a specific period of time.

*Instantaneous discharge* is the discharge at a particular time.

*Dissolved* is an operational definition used by Federal and State agencies collecting water data as that material in a water sample which passes through a 0.45 um membrane filter. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

*Drainage area* of a stream at a specified location is measured in a horizontal plane and constitutes an area enclosed by a topographic divide from which surface runoff above the specified point drains by gravity into the stream. Values of the drainage areas given herein include closed basins and noncontributing areas within the basin, as noted.

*Gage height* (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage", although gage height is more appropriate when referring to a reading on a gage. See also Lake stage.

*Gaging station* is a particular site on a stream or lake where systematic hydrologic data are collected.

*Geologic unit* is a geologic formation or group of formations; in this report, the term is used in the same sense as "aquifer" and refers to the geologic formation(s) open to the uncased or screened portion of a well.

*Hardness* is a physical-chemical characteristic of water that is attributable principally to the presence of calcium and magnesium and is expressed as calcium carbonate (CaCO$^3$). Hardness is commonly recognized by the increased quantity of soap required to produce lather.

*Hydrologic unit* designates part or all of a surface-drainage basin delineated by the Office of Water Data Coordination; each hydrologic unit is identified by an 8-digit number.

*Lake stage* is the elevation of the lake's water surface referred to some arbitrary gage datum.

*Micrograms per gram* (μg/g) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit mass (gram) of sediment.

Micrograms per kilogram (μg/kg) indicates the concentration of a chemical constituent as mass (micrograms) of that constituent per unit mass (kilogram) of sediment.

Micrograms per liter (μg/L) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (mg/L) indicates the concentration of a chemical constituent or suspended sediment as tne mass (milligrams) per unit volume (liter) of water.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent mean sea level at any particular place.

Partial-record station is a site for the systematic collection of limited streamflow or water-quality data over a period of years.

Particle size is measured as the diameter, in millimeters (mm), of suspended sediment and bed material determined by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) measure the fall diameter of particles in distilled water (chemically dispersed) or native water (surface water at the time and point of sampling).

Particle-size classification for this report is based on recommendations of the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

| Classification | Size (mm) | Method of analyis |
|---|---|---|
| Clay.......... | 0.00024 - 0.004 | Sedimentation. |
| Silt.......... | .004 - .062 | Sedimentation. |
| Sand.......... | .062 - 2.0 | Sedimentation or sieve. |
| Gravel........ | 2.0 - 64.0 | Sieve. |

Pesticides are chemical compounds used to control undesirable plants and animals. They include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides control insects and plants respectively and are the two categories reported.

Picocurie (PCi) is one trillionth ($1 \times 10^{-12}$) of a curie (Ci). A curie is the amount of radioactivity that yields $3.7 \times 10^{10}$ disintegrations per second. A picocurie yields 2.22 disintegrations per minute.

Polychlorinated biphenyls (PCB's) are industrial chemicals composed of biphenyl compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

Polychlorinated naphthalenes (PCN's) are industrial chemicals composed of naphthalene compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

Recoverable from bottom material is the amount of a given constituent that is in solution after a sample of bottom material has been digested by an acid or mixture of acids that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material usually is not achieved by the digestion treatment and thus the determination represents less than the total amount of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) indicates the depth of water that would cover a drainage area if all runoff for a given time period were uniformly distributed.

Secchi disk is a black and white plate, 20-25 cm in diameter, which is lowered into a lake on a calibrated line until it is no longer visible. The depth, in meters, at which the disk just disappears is reported as a measure of transparency.

Sediment originates mostly from disintegrated rocks and is transported by, suspended in, and deposited by water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. Topography, geology, soil type, land cover, land use, quantity and intensity of precipitation, and other environmental factors influence the quantity, characteristics, and cause of sediment in streams.

Suspended sediment is sediment maintained in suspension by turbulent currents or as a colloid.

Suspended-sediment discharge is the quantity of suspended sediment passing through a stream cross section in a unit of time. It is computed by multiplying water discharge times suspended-sediment concentration times 0.0027.

Suspended-sediment concentration is the discharge-weighted concentration of suspended sediment in a sample zone (from the water surface to approximately 0.3 ft above the streambed) and is expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing through a stream cross section during a 24-hour period.

Sodium-adsorption ratio (SAR) expresses the relative activity of sodium ions in exchange reactions with soil.

Solute is any substance dissolved in water.

Specific conductance is a measure of the ability of water to conduct electrical current and is expressed in microsiemens per centimeter at 25°C. It is related to the number and specific types of ions in solution, and is useful for approximating the concentration of dissolved solids in the water. Commonly, the concentration of dissolved solids mg/L is about 65 percent of the specific conductance.

Stage-discharge relation correlates height (stage) and the volume of water flowing in a channel per unit of time.

Streamflow uniquely describes discharge in the natural channel of a surface stream course as opposed to the term "discharge", which can be applied to the flow of a canal. Unlike the term "runoff", streamflow may be applied to discharge whether it is affected by diversion or regulation or not.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a water-sediment sample retained on a 0.45 µm membrane filter has been digested by dilute acid that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter usually is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of dissolved and total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of dissolved and total recoverable concentrations of the constituent.

Tons per acre-foot indicates the dry weight of a constituent in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the measure of a substance that passes a stream section in solution or suspension during a 24-hour period. It is computed by multiplying the concentration of the substance (mg/L) by 0.0027 times the discharge of the stream (cfs).

Total is the total amount of a given constituent in a water-sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." The term indicates the sample consists of a water-sediment mixture and that the analytical method determines all of the constituent in the sample.

Total, recoverable is the amount of a given constituent that is in solution after a water-sediment sample has been digested by dilute acid resulting in dissolution of only readily soluble substances. Complete dissolution of all particulate matter usually is not achieved, thus the determination represents something less than the "total" amount of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

WDR is the abbreviation for "Water-Data Report" used in the summary REVISIONS paragraph to indicate previously published State annual basic data report (WRD was used an abbreviation for "Water-Resources Data" in reports published prior to 1982.

WSP is the abbreviation for "Water-Supply Paper" used in references to previously published reports.

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open- File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.

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3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

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# ST. LAWRENCE RIVER BASIN RECORDS

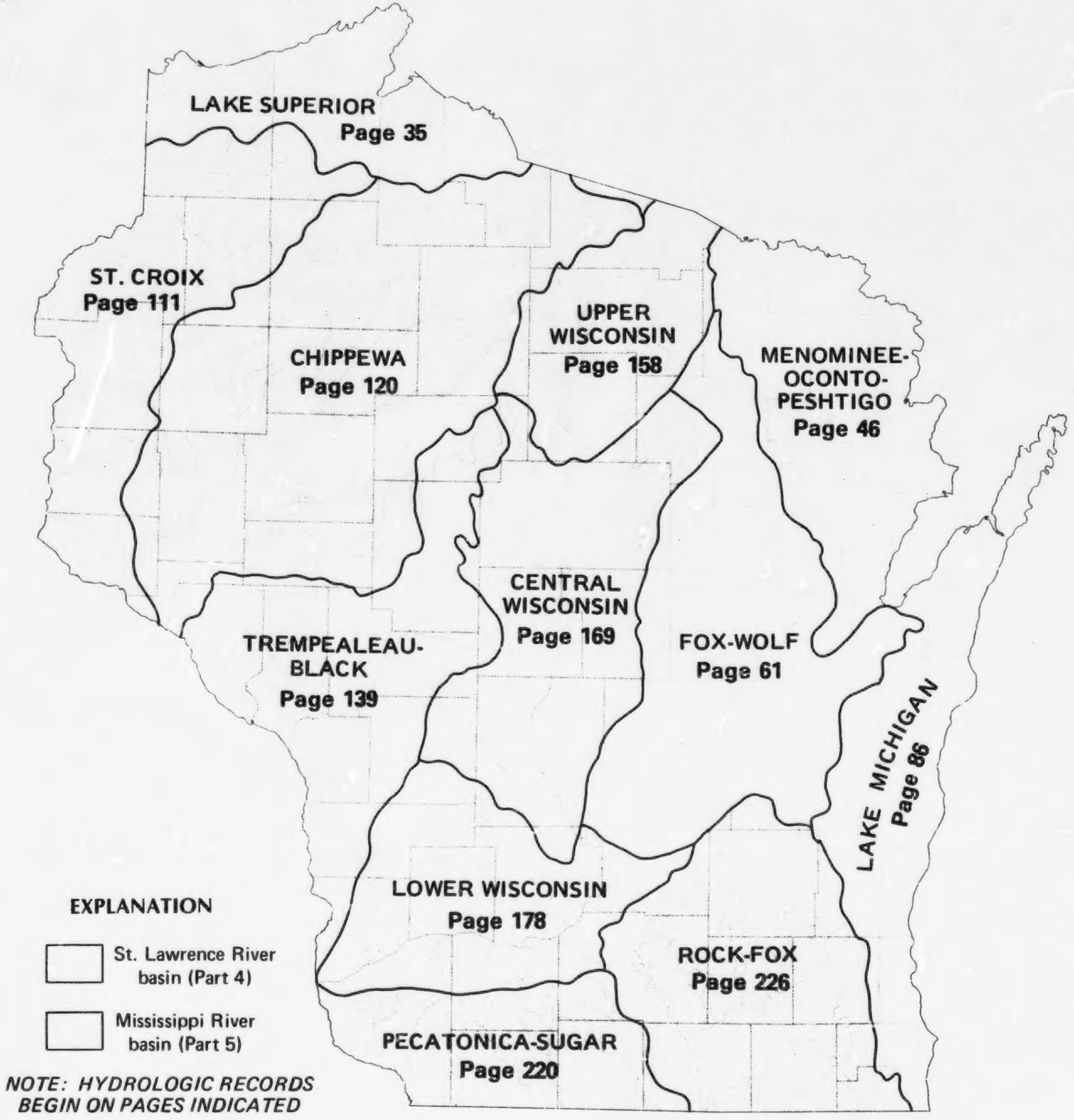

Figure 5. Major surface-water drainage basins and index of hydrologic records.

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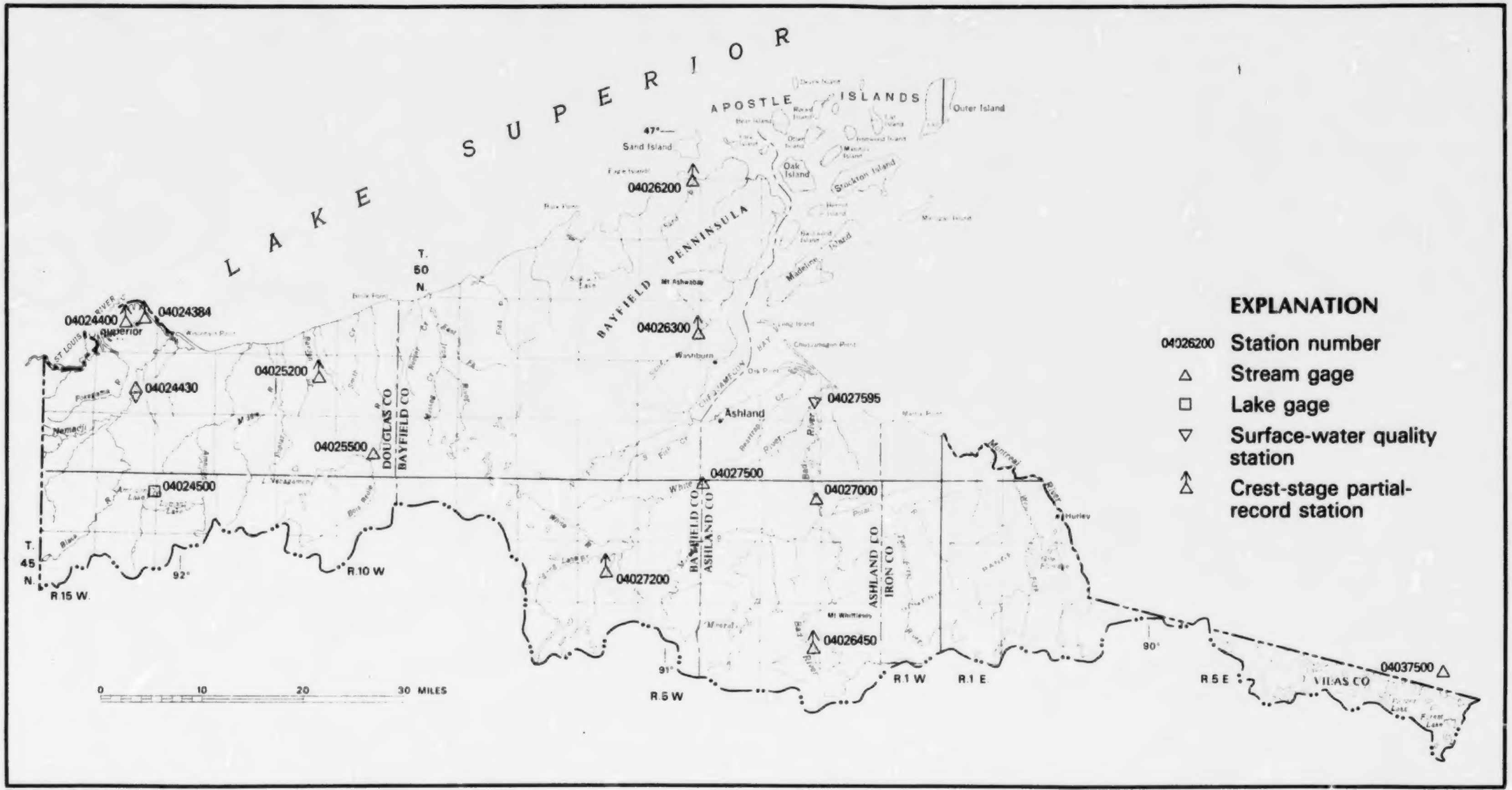

Base from U.S. Geological Survey
State base map, 1968

LAKE SUPERIOR BASIN

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35

## 04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 46°38'00", long 92°05'38", in SW 1/4 sec.14, T.48 N., R.14 W., Douglas County, Hydrologic Unit 04010301, on right bank at downstream side of bridge on County Trunk Highway C, 2.0 mi south of South Superior and 7.8 mi downstream from Black River.

DRAINAGE AREA.--420 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1973 to current year.

REVISED RECORDS.--WDR WI-75-1: 1974(M). WDR WI-82-1: Drainage area and 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 601.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating tables below. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--12 years, 434 ft$^3$/s, 14.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft$^3$/s May 10, 1979, gage height, 22.83 ft; maximum gage height, 23.82 ft, Sept. 3, 1985; minimum daily, 16 ft$^3$/s Dec. 8, 1976.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--A flood of Aug. 17, 1972, may have exceeded floods at this location since then.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft$^3$/s, revised, and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Apr. 1 | 1700 | ice jam | *22.64 | June 11 | 2000 | 5,300 | 20.53 |
| Apr. 2 | ---- | 6,400 | ice jam | July 19 | 2300 | 3,930 | 18.28 |
| Apr. 29 | 0800 | *8,840 | 22.29 | Aug. 10 | 1500 | 4,300 | 18.79 |
| May 12 | 0500 | 4,330 | 19.42 | Sept.18 | 0100 | 4,280 | 18.76 |
| May 14 | 0500 | 4,550 | 19.91 | Sept.22 | 2200 | 4,820 | 19.42 |

Minimum daily discharge, 88 ft$^3$/s Mar. 8, result of freezeup.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-7, May 2-10, May 13 to June 12; stage-discharge relation affected by ice Nov. 10 to Apr. 4.)

| Oct. 1 to May 7(1300) | | | | May 7(1400) to June 12 | | | | June 13 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.0 | 84 | 14.0 | 2,260 | 4.9 | 151 | 15.0 | 2,170 | 5.0 | 190 | 17.0 | 3,200 |
| 5.0 | 198 | 18.0 | 3,820 | 6.0 | 272 | 17.0 | 2,960 | 7.0 | 473 | 18.0 | 3,730 |
| 6.0 | 342 | 20.0 | 5,200 | 8.0 | 543 | 19.0 | 4,050 | 11.0 | 1,280 | 19.0 | 4,460 |
| 9.0 | 920 | 22.0 | 7,950 | 11.0 | 1,090 | 20.0 | 4,750 | 15.0 | 2,400 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2060 | 299 | 190 | 110 | 96 | 92 | 4700 | 2690 | 177 | 276 | 281 | 1540 |
| 2 | 1420 | 331 | 190 | 110 | 100 | 92 | 6400 | 1870 | 163 | 255 | 252 | 1690 |
| 3 | 1010 | 330 | 190 | 110 | 100 | 92 | 5400 | 1390 | 155 | 239 | 234 | 973 |
| 4 | 819 | 301 | 190 | 110 | 100 | 92 | 3800 | 1080 | 277 | 225 | 213 | 1780 |
| 5 | 686 | 280 | 190 | 110 | 100 | 92 | 3000 | 881 | 591 | 279 | 197 | 1130 |
| 6 | 582 | 270 | 190 | 100 | 100 | 92 | 2740 | 712 | 430 | 311 | 263 | 730 |
| 7 | 513 | 285 | 190 | 100 | 100 | 90 | 2580 | 581 | 393 | 343 | 864 | 556 |
| 8 | 879 | 281 | 180 | 92 | 100 | 88 | 2550 | 594 | 813 | 262 | 2120 | 466 |
| 9 | 1120 | 248 | 180 | 94 | 100 | 90 | 1940 | 2090 | 573 | 226 | 1030 | 407 |
| 10 | 783 | 240 | 170 | 96 | 100 | 96 | 1550 | 1880 | 672 | 208 | 3700 | 520 |
| 11 | 635 | 240 | 160 | 98 | 100 | 100 | 1320 | 3120 | 4480 | 224 | 2220 | 691 |
| 12 | 885 | 230 | 160 | 100 | 100 | 100 | 1130 | 4010 | 4240 | 1670 | 958 | 727 |
| 13 | 1380 | 220 | 150 | 100 | 100 | 110 | 957 | 3620 | 1950 | 2110 | 676 | 609 |
| 14 | 952 | 200 | 150 | 100 | 100 | 110 | 868 | 4240 | 1220 | 1310 | 1380 | 510 |
| 15 | 743 | 190 | 140 | 98 | 100 | 110 | 1620 | 2460 | 919 | 1120 | 2140 | 445 |
| 16 | 614 | 200 | 130 | 98 | 100 | 110 | 1570 | 1510 | 749 | 2610 | 1160 | 458 |
| 17 | 525 | 220 | 130 | 98 | 100 | 120 | 1120 | 1170 | 613 | 1360 | 744 | 2230 |
| 18 | 464 | 240 | 120 | 100 | 100 | 120 | 922 | 897 | 494 | 821 | 559 | 3430 |
| 19 | 420 | 700 | 120 | 100 | 100 | 130 | 1260 | 696 | 421 | 2150 | 458 | 1630 |
| 20 | 377 | 520 | 110 | 100 | 100 | 140 | 1290 | 564 | 398 | 2720 | 889 | 2520 |
| 21 | 348 | 370 | 110 | 100 | 98 | 140 | 1010 | 477 | 1250 | 1050 | 1680 | 2060 |
| 22 | 326 | 320 | 110 | 100 | 96 | 150 | 820 | 409 | 2260 | 715 | 1090 | 4020 |
| 23 | 318 | 270 | 110 | 100 | 94 | 160 | 698 | 356 | 1290 | 548 | 2350 | 3660 |
| 24 | 357 | 250 | 110 | 100 | 94 | 200 | 705 | 321 | 827 | 450 | 1330 | 1860 |
| 25 | 352 | 230 | 110 | 100 | 92 | 250 | 1600 | 323 | 627 | 405 | 833 | 1890 |
| 26 | 322 | 220 | 110 | 98 | 92 | 260 | 1420 | 330 | 508 | 352 | 646 | 2140 |
| 27 | 306 | 210 | 110 | 96 | 92 | 270 | 2970 | 293 | 831 | 409 | 531 | 2210 |
| 28 | 287 | 200 | 110 | 96 | 92 | 290 | 4720 | 267 | 607 | 694 | 447 | 1640 |
| 29 | 271 | 200 | 110 | 96 | --- | 450 | 7450 | 238 | 406 | 473 | 390 | 1110 |
| 30 | 275 | 200 | 110 | 96 | --- | 1000 | 4670 | 216 | 320 | 365 | 350 | 915 |
| 31 | 308 | --- | 110 | 96 | --- | 2500 | --- | 195 | --- | 314 | 319 | --- |
| TOTAL | 20337 | 8295 | 4440 | 3102 | 2746 | 7736 | 72780 | 39480 | 28654 | 24494 | 30304 | 44547 |
| MEAN | 656 | 277 | 143 | 100 | 98.1 | 250 | 2426 | 1274 | 955 | 790 | 978 | 1485 |
| MAX | 2060 | 700 | 190 | 110 | 100 | 2500 | 7450 | 4240 | 4480 | 2720 | 3700 | 4020 |
| MIN | 271 | 190 | 110 | 92 | 92 | 88 | 698 | 195 | 155 | 208 | 197 | 407 |
| CFSM | 1.56 | .66 | .34 | .24 | .23 | .60 | 5.78 | 3.03 | 2.27 | 1.88 | 2.33 | 3.54 |
| IN. | 1.80 | .73 | .39 | .27 | .24 | .69 | 6.45 | 3.50 | 2.54 | 2.17 | 2.68 | 3.95 |

CAL YR 1985 TOTAL 170764 MEAN 468 MAX 6810 MIN 42 CFSM 1.11 IN 15.12
WTR YR 1986 TOTAL 286915 MEAN 786 MAX 7450 MIN 88 CFSM 1.87 IN 25.41

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### 04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED
### (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.-- April 1974 to September 1986 (discontinued).

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DISCHARGE, IN CUBIC FEET PER SECOND (00060) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>08... | 1645 | 1200 | -- | 172 | 7.90 | 8.0 | 65 | 10.9 | 751 | 93 |
| JAN , 1986<br>08... | 0950 | -- | 92 | 278 | 7.70 | .0 | 8.7 | 12.8 | 765 | 87 |
| MAR<br>04... | 1145 | -- | 92 | 248 | 7.80 | .5 | 9.1 | 12.8 | 759 | 89 |
| APR<br>07... | 1150 | 2590 | -- | 110 | 7.90 | 2.0 | 32 | 13.4 | 753 | 98 |
| JUN<br>26... | 1115 | 510 | -- | 144 | 7.80 | 21.0 | 55 | 8.7 | 751 | 99 |
| AUG<br>20... | 1315 | 673 | -- | 160 | 7.90 | 18.5 | 450 | 7.9 | 760 | 85 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>08... | 740 | K10000 | 83 | 11 | 22 | 6.7 | 2.7 | 7 | .1 | 1.3 |
| JAN , 1986<br>08... | K16 | 43 | 120 | 0 | 31 | 10 | 4.9 | 8 | .2 | 1.2 |
| MAR<br>04... | K4 | K1500 | 110 | 12 | 29 | 10 | 5.4 | 9 | .2 | 1.0 |
| APR<br>07... | -- | -- | 47 | 6 | 13 | 3.5 | 1.6 | 7 | .1 | 1.1 |
| JUN<br>26... | K100 | 140 | 70 | 8 | 19 | 5.4 | 2.1 | 6 | .1 | .60 |
| AUG<br>20... | K2700 | K5600 | 84 | 13 | 23 | 6.4 | 2.5 | 6 | .1 | 1.3 |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>08... | 88 | -- | 71 | 1.8 | 9.7 | 3.1 | <.10 | 9.3 | 126 |
| JAN , 1986<br>08... | 149 | -- | 120 | 4.7 | 14 | 4.4 | <.10 | 15 | 139 |
| MAR<br>04... | 124 | -- | 100 | 3.1 | 13 | 4.0 | .10 | 16 | 142 |
| APR<br>07... | 50 | -- | 40 | 1.0 | 10 | 1.6 | <.10 | 8.3 | 83 |
| JUN<br>26... | 75 | -- | 60 | 1.9 | 10 | 2.3 | <.10 | 6.9 | 110 |
| AUG<br>20... | 87 | -- | 70 | 1.7 | 11 | 2.4 | <.10 | 9.7 | 129 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>08... | 99 | .17 | 408 | <.10 | .020 | 1.3 | .060 | .030 | .040 |
| JAN , 1986<br>08... | 150 | .19 | 35 | .23 | .080 | .60 | .030 | .020 | .010 |
| MAR<br>04... | 140 | .19 | 35 | .31 | .050 | .30 | .020 | .010 | <.010 |
| APR<br>07... | 64 | .11 | 580 | .10 | .050 | .80 | .200 | .010 | <.010 |
| JUN<br>26... | 83 | .15 | 151 | <.10 | .020 | .90 | .090 | .020 | <.010 |
| AUG<br>20... | 100 | .18 | 234 | <.10 | .040 | 1.0 | .140 | .030 | .010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

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## 04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 08... | 1645 | 1200 | -- | 100 | <1 | 32 | <.5 | <1 | 6 | <3 | 5 |
| MAR , 1986 | | | | | | | | | | | |
| 04... | 1145 | -- | 92 | 20 | 1 | 47 | <.5 | <1 | <1 | <3 | 4 |
| AUG | | | | | | | | | | | |
| 20... | 1315 | 673 | -- | 190 | 1 | 36 | <.5 | <1 | 2 | <3 | 9 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 08... | 350 | 1 | <4 | 19 | <.1 | <10 | 12 | <1 | 48 | <6 | <3 |
| MAR , 1986 | | | | | | | | | | | |
| 04... | 470 | 8 | 5 | 22 | <.1 | <10 | 6 | <1 | 78 | <6 | 8 |
| AUG | | | | | | | | | | | |
| 20... | 580 | <5 | <4 | 11 | .1 | <10 | 5 | <1 | 52 | <6 | 11 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 08... | 1645 | 1200 | -- | 172 | 8.0 | 330 | 1070 | 92 |
| DEC | | | | | | | | |
| 05... | 1545 | 190 | -- | 240 | .0 | -- | -- | -- |
| JAN , 1986 | | | | | | | | |
| 08... | 0950 | -- | 92 | 278 | .0 | 11 | 2.8 | 95 |
| MAR | | | | | | | | |
| 04... | 1145 | -- | 92 | 248 | .5 | 10 | 2.5 | 92 |
| APR | | | | | | | | |
| 04... | 1345 | 3750 | -- | 140 | 4.0 | -- | -- | -- |
| 07... | 1150 | 2590 | -- | 110 | 2.0 | 428 | 2990 | 81 |
| MAY | | | | | | | | |
| 07... | 1200 | 575 | -- | 148 | 11.5 | -- | -- | -- |
| 07... | 1235 | 581 | -- | 129 | 13.0 | -- | -- | -- |
| JUN | | | | | | | | |
| 02... | 1420 | 163 | -- | 210 | 17.5 | -- | -- | -- |
| 26... | 1115 | 510 | -- | 144 | 21.0 | 139 | 191 | 92 |
| JUL | | | | | | | | |
| 29... | 1615 | 445 | -- | 230 | 19.0 | -- | -- | -- |
| AUG | | | | | | | | |
| 20... | 1315 | 673 | -- | 160 | 18.5 | 1450 | 2630 | 96 |

## 04024500 AMNICON LAKE NEAR SOUTH RANGE, WI

LOCATION.--Lat 46°28'59", long 92°04'01", in SW 1/4 NW 1/4 sec.12, T.46 N., R.14 W., Douglas County, Hydrologic Unit 04010301, 9.5 mi southwest of South Range.

DRAINAGE AREA.--4.8 mi$^2$, approximately.

PERIOD OF RECORD.--August 1936 to September 1964 (fragmentary), October 1984 to current year.

GAGE.--Staff gage read by Dennis Corbin. Elevation of gage is 1195 ft, from topographic map. Prior to 1964, staff gage 0.3 mi west at different datum.

REMARKS.--Lake ice-covered Nov. 11 to Apr. 14.

EXTREMES FOR PERIOD OF RECORD (OCTOBER 1984 TO CURRENT YEAR).--Maximum gage height observed, 18.34 ft, Apr. 20, 1986; minimum observed, 17.18 ft, Aug. 21, 22, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 18.34 ft, Apr. 20; minimum observed, 17.46 ft, Nov. 10.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.76 | 17.54 | | | | | --- | 18.18 | | | | |
| 2 | 17.80 | --- | | | | | --- | 18.20 | | | | |
| 3 | 17.80 | 17.54 | | | | | --- | 18.18 | | | | |
| 4 | 17.82 | 17.53 | | | | | --- | 18.18 | | | | |
| 5 | 17.84 | 17.52 | | | | | --- | --- | | | | |
| 6 | 17.84 | 17.52 | | | | | --- | --- | | | | |
| 7 | 17.83 | 17.50 | | | | | --- | --- | | | | |
| 8 | 17.82 | 17.48 | | | | | --- | --- | | | | |
| 9 | 17.81 | --- | | | | | --- | --- | | | | |
| 10 | 17.80 | 17.46 | | | | | --- | --- | | | | |
| 11 | 17.80 | --- | | | | | --- | --- | | | | |
| 12 | 17.82 | --- | | | | | --- | --- | | | | |
| 13 | 17.84 | --- | | | | | --- | --- | | | | |
| 14 | 17.82 | --- | | | | | --- | --- | | | | |
| 15 | 17.80 | --- | | | | | --- | --- | | | | |
| 16 | 17.78 | --- | | | | | --- | --- | | | | |
| 17 | 17.76 | --- | | | | | --- | --- | | | | |
| 18 | 17.74 | --- | | | | | --- | --- | | | | |
| 19 | 17.72 | --- | | | | | --- | --- | | | | |
| 20 | 17.70 | --- | | | | | 18.34 | --- | | | | |
| 21 | 17.68 | --- | | | | | 18.32 | --- | | | | |
| 22 | 17.66 | --- | | | | | 18.28 | --- | | | | |
| 23 | 17.68 | --- | | | | | 18.22 | --- | | | | |
| 24 | 17.68 | --- | | | | | 18.24 | --- | | | | |
| 25 | 17.66 | --- | | | | | 18.22 | --- | | | | |
| 26 | 17.64 | --- | | | | | 18.22 | --- | | | | |
| 27 | 17.62 | --- | | | | | 18.20 | --- | | | | |
| 28 | 17.60 | --- | | | | | 18.20 | --- | | | | |
| 29 | 17.58 | --- | | | | | 18.22 | --- | | | | |
| 30 | 17.56 | --- | | | | | 18.20 | --- | | | | |
| 31 | 17.54 | --- | | | | | --- | --- | | | | |
| MEAN | 17.74 | --- | | | | | --- | --- | | | | |
| MAX | 17.84 | --- | | | | | --- | --- | | | | |
| MIN | 17.54 | --- | | | | | --- | --- | | | | |

## 04025500 BOIS BRULE RIVER NEAR BRULE, WI

**LOCATION.**--Lat 46°32'16", long 91°35'43", in NW 1/4 SW 1/4 sec.23, T.47 N., R.10 W., Douglas County, Hydrologic Unit 04010301, on right bank, 1.4 mi southwest of Brule Post Office, 1.4 mi downstream from Nebagamon Creek, and 1.7 mi upstream from Little Bois Brule River.

**DRAINAGE AREA.**--120 mi$^2$.

**PERIOD OF RECORD.**--October 1942 to September 1981, January 1984 to current year. Prior to January 1943, monthly discharge only, published in WSP 1307.

**REVISED RECORDS.**--WRD WI-71-1: Drainage area. WSP 1337: 1943(M), 1944, 1945-50(M).

**GAGE.**--Water-stage recorder. Datum of gage is 948.49 ft above National Geodetic Vertical Datum of 1929. Prior to October 1964, nonrecording gage at same site and datum, supplemented by water-stage recorder part of 1959-62.

**REMARKS.**--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair.

**AVERAGE DISCHARGE.**--41 years (water years 1943-81, 1985-86), 173 ft$^3$/s, 19.58 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 1,520 ft$^3$/s June 5, 1944, gage height, 5.2 ft, from graph based on gage readings and from rating curve extended above 750 ft$^3$/s; minimum observed, 67 ft$^3$/s Mar. 13, 1943.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 300 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 1 | 1600 | 402 | 2.85 | Aug. 14 | 1800 | 750 | 4.02 |
| Apr. 1 | 2200 | 761 | 4.05 | Aug. 22 | 2200 | 335 | 2.59 |
| Apr. 28 | 1600 | 388 | 2.80 | Sept. 4 | 0100 | 340 | 2.61 |
| May 13 | 1700 | *976 | *4.57 | Sept. 22 | 0600 | 404 | 2.86 |
| Aug. 10 | 0500 | 327 | 2.56 | | | | |

Minimum daily discharge, 130 ft$^3$/s, Feb. 5-19.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 22 to Feb. 24.)

| | | | |
|---|---|---|---|
| 1.6 | 129 | 3.0 | 443 |
| 2.0 | 200 | 4.0 | 742 |

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 388 | 198 | 160 | 140 | 140 | 144 | 504 | 314 | 183 | 168 | 164 | 195 |
| 2 | 370 | 199 | 160 | 140 | 140 | 143 | 598 | 289 | 177 | 165 | 161 | 189 |
| 3 | 330 | 195 | 160 | 140 | 140 | 144 | 517 | 269 | 173 | 161 | 158 | 220 |
| 4 | 301 | 189 | 160 | 140 | 140 | 144 | 468 | 257 | 199 | 165 | 156 | 302 |
| 5 | 280 | 185 | 160 | 140 | 130 | 145 | 496 | 245 | 194 | 170 | 154 | 246 |
| 6 | 260 | 188 | 160 | 140 | 130 | 147 | 477 | 238 | 186 | 172 | 152 | 232 |
| 7 | 245 | 187 | 160 | 140 | 130 | 149 | 457 | 230 | 210 | 161 | 179 | 224 |
| 8 | 267 | 181 | 160 | 140 | 130 | 153 | 440 | 227 | 222 | 156 | 200 | 215 |
| 9 | 253 | 175 | 160 | 140 | 130 | 146 | 411 | 230 | 208 | 156 | 201 | 213 |
| 10 | 245 | 172 | 160 | 140 | 130 | 148 | 383 | 234 | 214 | 154 | 308 | 244 |
| 11 | 238 | 168 | 160 | 140 | 130 | 147 | 360 | 284 | 292 | 157 | 259 | 231 |
| 12 | 283 | 167 | 160 | 140 | 130 | 146 | 337 | 305 | 282 | 181 | 226 | 223 |
| 13 | 285 | 167 | 160 | 140 | 130 | 147 | 317 | 720 | 253 | 218 | 206 | 216 |
| 14 | 271 | 165 | 160 | 140 | 130 | 149 | 307 | 699 | 226 | 224 | 457 | 208 |
| 15 | 258 | 162 | 160 | 140 | 130 | 149 | 321 | 533 | 204 | 217 | 534 | 207 |
| 16 | 245 | 170 | 150 | 150 | 130 | 149 | 308 | 508 | 199 | 215 | 372 | 199 |
| 17 | 233 | 172 | 150 | 150 | 130 | 152 | 293 | 446 | 188 | 196 | 321 | 238 |
| 18 | 224 | 171 | 150 | 150 | 130 | 158 | 285 | 395 | 179 | 181 | 292 | 242 |
| 19 | 217 | 212 | 150 | 140 | 130 | 165 | 291 | 357 | 174 | 260 | 264 | 246 |
| 20 | 210 | 207 | 150 | 140 | 140 | 150 | 279 | 325 | 173 | 243 | 278 | 312 |
| 21 | 206 | 216 | 150 | 140 | 140 | 156 | 267 | 299 | 193 | 215 | 282 | 292 |
| 22 | 202 | 190 | 150 | 140 | 140 | 157 | 254 | 278 | 243 | 201 | 283 | 386 |
| 23 | 205 | 180 | 150 | 140 | 140 | 161 | 242 | 262 | 232 | 187 | 318 | 342 |
| 24 | 205 | 170 | 150 | 140 | 140 | 156 | 252 | 251 | 222 | 186 | 286 | 317 |
| 25 | 197 | 170 | 150 | 140 | 143 | 159 | 265 | 247 | 201 | 180 | 269 | 351 |
| 26 | 194 | 170 | 150 | 140 | 143 | 166 | 262 | 235 | 193 | 174 | 254 | 338 |
| 27 | 189 | 160 | 140 | 140 | 143 | 165 | 343 | 225 | 202 | 198 | 235 | 336 |
| 28 | 186 | 160 | 140 | 140 | 144 | 172 | 384 | 215 | 190 | 196 | 220 | 317 |
| 29 | 187 | 160 | 140 | 140 | --- | 192 | 372 | 206 | 180 | 188 | 210 | 312 |
| 30 | 190 | 160 | 140 | 140 | --- | 228 | 342 | 198 | 172 | 178 | 201 | 300 |
| 31 | 186 | --- | 140 | 140 | --- | 321 | --- | 190 | --- | 170 | 198 | --- |
| TOTAL | 7550 | 5366 | 4750 | 4370 | 3783 | 5008 | 10832 | 9711 | 6164 | 5793 | 7798 | 7893 |
| MEAN | 244 | 179 | 153 | 141 | 135 | 162 | 361 | 313 | 205 | 187 | 252 | 263 |
| MAX | 388 | 216 | 160 | 150 | 144 | 321 | 598 | 720 | 292 | 260 | 534 | 386 |
| MIN | 186 | 160 | 140 | 140 | 130 | 143 | 242 | 190 | 172 | 154 | 152 | 189 |
| CFSM | 2.03 | 1.49 | 1.28 | 1.18 | 1.13 | 1.35 | 3.01 | 2.61 | 1.71 | 1.56 | 2.10 | 2.19 |
| IN. | 2.34 | 1.66 | 1.47 | 1.35 | 1.17 | 1.55 | 3.36 | 3.01 | 1.91 | 1.80 | 2.42 | 2.45 |

CAL YR 1985 TOTAL 72681 MEAN 199 MAX 677 MIN 132 CFSM 1.66 IN 22.53
WTR YR 1986 TOTAL 79018 MEAN 216 MAX 720 MIN 130 CFSM 1.80 IN 24.50

## 04027000 BAD RIVER NEAR ODANAH, WI

LOCATION.--Lat 46°29'15", long 90°41'45", in SE 1/4 sec.2, T.46 N., R.3 W., Ashland County, Hydrologic Unit 04010302, Bad River Indian Reservation, on left bank just downstream from Elm Hoist bridge, 5.0 mi downstream from Potato River, 8.5 mi south of Odanah, and 23 mi from mouth.

DRAINAGE AREA.--597 mi$^2$.

PERIOD OF RECORD.--July 1914 to December 1922 (monthly discharge only for some periods published in WSP 1307), May 1948 to current year.

REVISED RECORDS.--WSP 1337: 1922. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 668.30 ft above National Geodetic Vertical Datum of 1929. May 17, 1948, to Nov. 6, 1959, and Oct. 19, 1960, to Nov. 23, 1961, water-stage recorder. Nov. 7,1959, to Oct. 18, 1960, and Nov. 24, 1961, to July 12, 1962, nonrecording gage. Prior to Nov. 11, 1922, water-stage recorder at site 2 mi downstream at different datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--46 years (1915-22, 1949-86), 631 ft$^3$/s, 14.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,700 ft$^3$/s Apr. 24, 1960, gage height, 21.7 ft from floodmarks and from rating curve extended above 12,000 ft$^3$/s and a comparison with contracted-opening measurement of peak flow 45,600 ft$^3$/s at Odanah, drainage area 990 mi$^2$; minimum, 34 ft$^3$/s Nov. 8, 1976, result of freezeup.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of June 24, 1946, reached a stage of at least 22.2 ft, top of downstream bridge submerged, information from Indian Service.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 4 | 2400 | 9,290 | 13.03 | Sept. 22 | 1900 | 3,080 | 7.21 |
| Apr. 1 | 1400 | *11,500 | *14.66 | | | | |

Minimum daily discharge, 173 ft$^3$/s June 3, Sept. 3.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used May 29 to June 8; stage-discharge relation affected by ice Nov. 11-12, Nov. 20 to Mar. 30.)

| | | | |
|---|---|---|---|
| 2.5 | 162 | 10.0 | 5,800 |
| 3.0 | 323 | 12.0 | 8,180 |
| 4.0 | 780 | 14.0 | 10,600 |
| 6.0 | 2,100 | 15.0 | 12,000 |
| 8.0 | 3,810 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4320 | 998 | 420 | 340 | 270 | 210 | 10900 | 1420 | 190 | 422 | 407 | 184 |
| 2 | 2830 | 2120 | 420 | 330 | 270 | 210 | 9450 | 1090 | 181 | 347 | 368 | 177 |
| 3 | 2670 | 1770 | 420 | 330 | 260 | 220 | 7240 | 875 | 173 | 293 | 353 | 173 |
| 4 | 8240 | 1450 | 420 | 330 | 260 | 230 | 5500 | 740 | 197 | 259 | 315 | 291 |
| 5 | 8070 | 1160 | 420 | 330 | 260 | 230 | 4670 | 661 | 236 | 255 | 305 | 392 |
| 6 | 5230 | 1000 | 410 | 330 | 260 | 230 | 4550 | 587 | 236 | 256 | 390 | 333 |
| 7 | 3480 | 978 | 410 | 320 | 260 | 230 | 3960 | 522 | 253 | 243 | 420 | 277 |
| 8 | 2590 | 872 | 410 | 320 | 260 | 220 | 3290 | 465 | 329 | 224 | 542 | 237 |
| 9 | 1990 | 769 | 410 | 320 | 260 | 220 | 2620 | 456 | 319 | 208 | 535 | 212 |
| 10 | 1840 | 683 | 400 | 320 | 250 | 220 | 2080 | 436 | 303 | 193 | 578 | 227 |
| 11 | 1540 | 660 | 400 | 310 | 190 | 230 | 1660 | 473 | 336 | 184 | 624 | 256 |
| 12 | 1330 | 600 | 390 | 310 | 280 | 240 | 1390 | 781 | 401 | 264 | 483 | 280 |
| 13 | 1360 | 562 | 390 | 310 | 250 | 250 | 1190 | 1130 | 413 | 561 | 384 | 293 |
| 14 | 1240 | 528 | 380 | 310 | 240 | 270 | 1040 | 2350 | 372 | 723 | 330 | 303 |
| 15 | 1090 | 474 | 370 | 310 | 240 | 290 | 1200 | 1910 | 327 | 615 | 375 | 312 |
| 16 | 955 | 513 | 370 | 300 | 240 | 310 | 1500 | 1430 | 323 | 803 | 393 | 429 |
| 17 | 852 | 501 | 360 | 300 | 240 | 340 | 1300 | 1100 | 291 | 661 | 346 | 434 |
| 18 | 792 | 501 | 360 | 300 | 230 | 370 | 1100 | 838 | 279 | 531 | 293 | 578 |
| 19 | 751 | 635 | 350 | 290 | 230 | 410 | 999 | 671 | 462 | 515 | 255 | 545 |
| 20 | 689 | 560 | 350 | 290 | 230 | 470 | 970 | 557 | 994 | 815 | 230 | 802 |
| 21 | 634 | 540 | 350 | 290 | 230 | 500 | 944 | 472 | 742 | 678 | 221 | 785 |
| 22 | 601 | 520 | 350 | 280 | 220 | 520 | 928 | 411 | 788 | 526 | 221 | 2330 |
| 23 | 581 | 500 | 350 | 280 | 220 | 580 | 846 | 365 | 780 | 403 | 283 | 2110 |
| 24 | 607 | 480 | 340 | 280 | 220 | 620 | 770 | 332 | 618 | 336 | 367 | 1390 |
| 25 | 575 | 460 | 340 | 280 | 220 | 720 | 808 | 324 | 497 | 324 | 334 | 1040 |
| 26 | 541 | 440 | 340 | 270 | 210 | 900 | 773 | 323 | 518 | 272 | 291 | 1030 |
| 27 | 509 | 430 | 340 | 270 | 210 | 1100 | 950 | 306 | 1100 | 541 | 256 | 894 |
| 28 | 476 | 430 | 340 | 270 | 210 | 1400 | 1180 | 281 | 1090 | 1400 | 229 | 748 |
| 29 | 450 | 420 | 340 | 270 | --- | 3500 | 1840 | 252 | 776 | 987 | 211 | 654 |
| 30 | 439 | 420 | 340 | 270 | --- | 6000 | 1830 | 234 | 564 | 686 | 197 | 599 |
| 31 | 431 | --- | 340 | 270 | --- | 7560 | --- | 208 | --- | 513 | 191 | --- |
| TOTAL | 57703 | 21974 | 11630 | 9330 | 6720 | 28800 | 77478 | 22000 | 14088 | 15038 | 10727 | 18315 |
| MEAN | 1861 | 732 | 375 | 301 | 240 | 929 | 2583 | 710 | 470 | 485 | 346 | 611 |
| MAX | 8240 | 2120 | 420 | 340 | 280 | 7560 | 10900 | 2350 | 1100 | 1400 | 624 | 2330 |
| MIN | 431 | 420 | 340 | 270 | 190 | 210 | 770 | 208 | 173 | 184 | 191 | 173 |
| CFSM | 3.12 | 1.23 | .63 | .50 | .40 | 1.56 | 4.33 | 1.19 | .79 | .81 | .58 | 1.02 |
| IN. | 3.60 | 1.37 | .72 | .58 | .42 | 1.79 | 4.83 | 1.37 | .88 | .94 | .67 | 1.14 |

CAL YR 1985 TOTAL 314056 MEAN 860 MAX 8240 MIN 136 CFSM 1.44 IN 19.57
WTR YR 1986 TOTAL 293803 MEAN 805 *MAX 10900 MIN 173 CFSM 1.35 IN 18.31

## 04027500 WHITE RIVER NEAR ASHLAND, WI

LOCATION.--Lat 46°29'50", long 90°54'15", in NE 1/4 sec.6, T.46 N., R.4 W., Ashland County, Hydrologic Unit 04010302, at downstream end of powerplant of Lake Superior District Power Co., 0.3 mi downstream from bridge on State Highway 112 over dam, and 4.5 mi south of Ashland city limits.

DRAINAGE AREA.--301 mi$^2$.

PERIOD OF RECORD.--May 1948 to current year.

REVISED RECORDS.--WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 660.15 ft above National Geodetic Vertical Datum of 1929 (Lake Superior District Power Co. bench mark). Prior to May 20, 1976, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records are good except for ice-affected period, which is fair. Diurnal fluctuation caused by hydroelectric plant at gage.

AVERAGE DISCHARGE.--38 years, 285 ft$^3$/s, 12.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,270 ft$^3$/s July 1, 1953, gage height, 7.90 ft from rating curve extended above 3,000 ft$^3$/s; minimum, 3.1 ft$^3$/s Apr. 28-30, 1949, gage height, 0.09 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,960 ft$^3$/s Mar. 31, gage height, 6.11 ft; minimum daily, 147 ft$^3$/s July 4.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 11 to Feb. 26.)

| | | | |
|---|---|---|---|
| 1.1 | 138 | 2.5 | 769 |
| 1.5 | 263 | 3.0 | 1,120 |
| 2.0 | 485 | 4.0 | 2,050 |
| | | 5.0 | 3.260 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 546 | 357 | 243 | 200 | 210 | 219 | 2600 | 446 | 222 | 178 | 348 | 216 |
| 2 | 516 | 382 | 197 | 210 | 210 | 217 | 2120 | 406 | 231 | 176 | 323 | 238 |
| 3 | 497 | 388 | 226 | 220 | 220 | 232 | 1870 | 349 | 224 | 174 | 270 | 228 |
| 4 | 606 | 387 | 223 | 200 | 210 | 233 | 1540 | 302 | 226 | 147 | 228 | 372 |
| 5 | 608 | 359 | 228 | 180 | 210 | 259 | 1260 | 292 | 240 | 177 | 256 | 331 |
| 6 | 491 | 329 | 250 | 170 | 220 | 251 | 1140 | 225 | 231 | 180 | 260 | 319 |
| 7 | 471 | 287 | 255 | 160 | 210 | 216 | 816 | 242 | 236 | 183 | 247 | 318 |
| 8 | 456 | 276 | 259 | 170 | 220 | 206 | 708 | 235 | 244 | 154 | 270 | 315 |
| 9 | 429 | 297 | 276 | 180 | 200 | 254 | 532 | 213 | 263 | 182 | 285 | 278 |
| 10 | 384 | 258 | 275 | 210 | 190 | 221 | 519 | 221 | 248 | 156 | 342 | 276 |
| 11 | 350 | 233 | 260 | 240 | 190 | 240 | 427 | 286 | 240 | 186 | 347 | 275 |
| 12 | 377 | 251 | 230 | 250 | 200 | 228 | 359 | 304 | 237 | 200 | 345 | 277 |
| 13 | 359 | 245 | 220 | 240 | 200 | 251 | 310 | 607 | 239 | 261 | 330 | 277 |
| 14 | 332 | 243 | 210 | 250 | 200 | 250 | 294 | 678 | 251 | 299 | 319 | 275 |
| 15 | 333 | 240 | 200 | 250 | 200 | 241 | 440 | 640 | 222 | 286 | 316 | 273 |
| 16 | 309 | 235 | 210 | 230 | 190 | 246 | 401 | 617 | 188 | 332 | 281 | 280 |
| 17 | 286 | 248 | 220 | 220 | 190 | 266 | 424 | 550 | 196 | 369 | 278 | 256 |
| 18 | 274 | 230 | 240 | 230 | 210 | 276 | 395 | 483 | 192 | 378 | 273 | 256 |
| 19 | 255 | 356 | 260 | 210 | 220 | 262 | 357 | 404 | 185 | 368 | 268 | 290 |
| 20 | 263 | 350 | 270 | 220 | 210 | 257 | 330 | 359 | 161 | 327 | 244 | 538 |
| 21 | 158 | 255 | 300 | 220 | 200 | 226 | 311 | 284 | 196 | 306 | 250 | 356 |
| 22 | 173 | 250 | 280 | 210 | 190 | 296 | 290 | 245 | 200 | 305 | 268 | 1170 |
| 23 | 236 | 275 | 250 | 200 | 190 | 309 | 241 | 242 | 197 | 258 | 278 | 569 |
| 24 | 249 | 234 | 220 | 190 | 200 | 307 | 267 | 267 | 230 | 241 | 283 | 649 |
| 25 | 251 | 219 | 230 | 180 | 210 | 311 | 299 | 273 | 221 | 278 | 284 | 761 |
| 26 | 254 | 215 | 250 | 200 | 220 | 467 | 290 | 254 | 188 | 276 | 261 | 619 |
| 27 | 252 | 159 | 270 | 220 | 256 | 614 | 329 | 244 | 208 | 292 | 263 | 567 |
| 28 | 240 | 239 | 260 | 170 | 235 | 698 | 358 | 257 | 212 | 373 | 259 | 479 |
| 29 | 228 | 234 | 250 | 190 | --- | 1080 | 486 | 262 | 192 | 475 | 220 | 461 |
| 30 | 226 | 249 | 230 | 210 | --- | 1740 | 457 | 239 | 183 | 455 | 219 | 411 |
| 31 | 250 | --- | 210 | 230 | --- | 2360 | --- | 233 | --- | 396 | 217 | --- |
| TOTAL | 10659 | 8280 | 7502 | 6460 | 5811 | 13233 | 20170 | 10659 | 6503 | 8368 | 8632 | 11930 |
| MEAN | 344 | 276 | 242 | 208 | 208 | 427 | 672 | 344 | 217 | 270 | 278 | 398 |
| MAX | 608 | 388 | 300 | 250 | 256 | 2360 | 2600 | 678 | 263 | 475 | 348 | 1170 |
| MIN | 158 | 159 | 197 | 160 | 190 | 206 | 241 | 213 | 161 | 147 | 217 | 216 |
| CFSM | 1.14 | .92 | .80 | .69 | .69 | 1.42 | 2.23 | 1.14 | .72 | .90 | .92 | 1.32 |
| IN. | 1.32 | 1.02 | .93 | .80 | .72 | 1.64 | 2.49 | 1.32 | .80 | 1.03 | 1.07 | 1.47 |

CAL YR 1985 TOTAL 111717 MEAN 306 MAX 1830 MIN 76 CFSM 1.02 IN 13.81
WTR YR 1986 TOTAL 118207 MEAN 324 MAX 2600 MIN 147 CFSM 1.08 IN 14.61

## 04027595 BAD RIVER AT ODANAH, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 46°36'37", long 90°41'12", in SE 1/4 SE 1/4 sec.25, T.48 N., R.3 W., Ashland County, Hydrologic Unit 04010302, Bad River Indian Reservation, at bridge on U.S. Highway 2 at Odanah.

DRAINAGE AREA.--990 mi$^2$.

PERIOD OF RECORD.--February 1978 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | BARO-METRIC PRES-SURE (MM OF HG) (00025) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 3050 | 72 | 7.20 | 8.0 | 30 | 9.8 | 763 | 83 |
| JAN , 1986<br>08... | 1415 | 480 | 165 | 7.40 | .0 | 4.7 | 11.3 | 760 | 77 |
| MAR<br>05... | 1250 | 463 | 155 | 7.60 | .5 | 65 | 11.8 | 754 | 83 |
| APR<br>08... | 1150 | 4780 | 67 | 7.40 | 5.5 | 55 | 11.8 | 758 | 94 |
| JUN<br>25... | 1125 | 848 | 124 | 7.90 | 19.5 | 7.0 | 8.1 | 758 | 89 |
| AUG<br>21... | 1100 | 474 | 152 | 7.80 | 19.0 | 14 | 8.0 | 769 | 85 |

| DATE | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM AD-SORP-TION RATIO (00931) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 78 | 370 | 34 | 6 | 9.5 | 2.6 | 1.5 | 8 | .1 | 1.0 |
| JAN , 1986<br>08... | K14 | 21 | 75 | 0 | 20 | 6.0 | 3.1 | 8 | .2 | .90 |
| MAR<br>05... | K18 | K14 | 78 | 5 | 21 | 6.2 | 3.3 | 8 | .2 | .80 |
| APR<br>08... | K11 | 66 | 27 | 5 | 7.4 | 2.0 | 1.4 | 10 | .1 | .90 |
| JUN<br>25... | 83 | 75 | 58 | 3 | 16 | 4.5 | 2.4 | 8 | .1 | .70 |
| AUG<br>21... | 70 | 150 | 81 | 9 | 22 | 6.2 | 3.0 | 7 | .2 | .80 |

| DATE | BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440) | CAR-BONATE IT-FLD (MG/L AS CO3) (99445) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 34 | -- | 27 | 3.5 | 10 | 2.2 | <.10 | 7.9 | 68 |
| JAN , 1986<br>08... | 104 | -- | 84 | 6.6 | 9.1 | 2.4 | <.10 | 14 | 86 |
| MAR<br>05... | 89 | -- | 71 | 3.6 | 7.7 | 2.1 | .10 | 15 | 100 |
| APR<br>08... | 26 | -- | 21 | 1.6 | 11 | 1.4 | <.10 | 7.6 | 56 |
| JUN<br>25... | 68 | -- | 54 | 1.4 | 11 | 1.8 | <.10 | 8.7 | 90 |
| AUG<br>21... | 87 | -- | 70 | 2.2 | 8.9 | 1.9 | .10 | 12 | 108 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 53 | .09 | 560 | <.10 | .010 | .20 | .060 | .040 | .010 |
| JAN , 1986<br>08... | 110 | .12 | 111 | .17 | .030 | .40 | .020 | .010 | .010 |
| MAR<br>05... | 100 | .14 | 125 | .19 | .030 | .20 | .020 | .010 | <.010 |
| APR<br>08... | 45 | .08 | 723 | .11 | .030 | .60 | .080 | .020 | .010 |
| JUN<br>25... | 79 | .12 | 206 | <.10 | .040 | .70 | .040 | .020 | <.010 |
| AUG<br>21... | 98 | .15 | 138 | <.10 | .030 | .60 | .110 | .020 | .010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 04027595 BAD RIVER AT ODANAH, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 3050 | 20 | <1 | 20 | <.5 | 2 | 5 | <3 | 5 |
| MAR , 1986<br>05... | 1250 | 463 | 20 | <1 | 32 | <.5 | <1 | <1 | <3 | 1 |
| AUG<br>21... | 1100 | 474 | 20 | 1 | 35 | <.5 | <1 | 4 | <3 | 4 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 350 | 3 | 6 | 15 | <.1 | <10 | 18 | <1 | 23 | <6 | 4 |
| MAR , 1986<br>05... | 230 | 8 | <4 | 14 | <.1 | <10 | 5 | <1 | 49 | <6 | 7 |
| AUG<br>21... | 280 | <5 | <4 | 23 | .1 | <10 | 1 | <1 | 51 | <6 | 10 |

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 3050 | 72 | 8.0 | 126 | 1040 | 94 |
| JAN , 1986<br>08... | 1415 | 480 | 165 | .0 | 8 | 10 | 60 |
| MAR<br>05... | 1250 | 463 | 155 | .5 | 7 | 8.8 | 96 |
| APR<br>08... | 1150 | 4780 | 67 | 5.5 | 214 | 2760 | 89 |
| JUN<br>25... | 1125 | 848 | 124 | 19.5 | 14 | 32 | 94 |
| AUG<br>21... | 1100 | 474 | 152 | 19.0 | 20 | 26 | 94 |

## 04037500 CISCO BRANCH ONTONAGON RIVER AT CISCO LAKE OUTLET, MI

LOCATION.--Lat 46°15'12", long 89°27'05", in NE 1/4 sec.32, T.45 N., R.41 W., Gogebic County, Hydrologic Unit 04020102, on left bank 80 ft downstream from Cisco Lake Dam, 2.5 mi upstream from Langford Creek, 5.0 mi upstream from U.S. Highway 2, and 13 mi west of Watersmeet.

DRAINAGE AREA.--50.7 mi$^2$.

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,672.69 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, nonrecording gage at same site and at datum 4.00 ft higher.

REMARKS.--No estimated daily discharges. Records good except those below 1.5 ft$^3$/s, which are poor. Flow completely regulated by Cisco Lake, usable capacity, 15,600 acre-ft. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 47.7 ft$^3$/s, 12.78 in/yr.

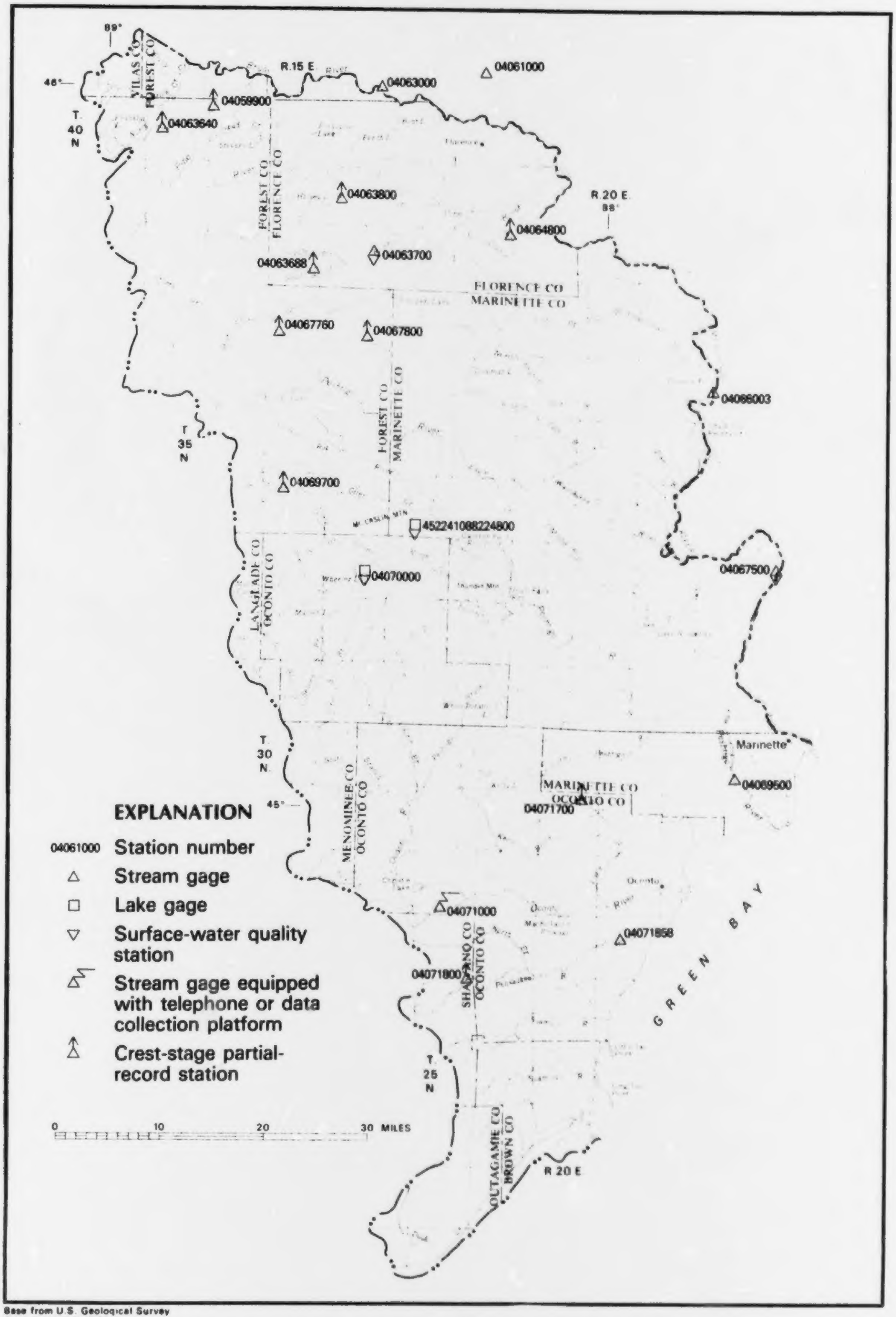
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 288 ft$^3$/s May 1-4, 1951, gage height, 6.10 ft, present datum; minimum daily, 0.09 ft$^3$/s June 4-23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 211 ft$^3$/s Oct. 8, gage height, 5.68 ft; minimum daily, 0.57 ft$^3$/s June 6.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 155 | 39 | 82 | 39 | 35 | 35 | 114 | 129 | 1.1 | 1.3 | 1.6 | 1.8 |
| 2 | 179 | 93 | 85 | 38 | 35 | 35 | 140 | 126 | 1.2 | 1.3 | 1.6 | 29 |
| 3 | 174 | 138 | 84 | 38 | 35 | 34 | 143 | 51 | 1.1 | 1.2 | 1.4 | 54 |
| 4 | 180 | 135 | 82 | 38 | 35 | 34 | 146 | 3.9 | .59 | 1.2 | 1.4 | 75 |
| 5 | 203 | 136 | 82 | 39 | 35 | 35 | 151 | 3.4 | .62 | 1.3 | 2.1 | 93 |
| 6 | 207 | 132 | 81 | 39 | 35 | 35 | 155 | 2.8 | .57 | 1.0 | 2.1 | 65 |
| 7 | 205 | 128 | 80 | 38 | 35 | 35 | 156 | 2.3 | .63 | .99 | 2.4 | 46 |
| 8 | 206 | 124 | 79 | 39 | 35 | 35 | 144 | 1.9 | .60 | .96 | 27 | 27 |
| 9 | 199 | 95 | 61 | 38 | 35 | 34 | 135 | 1.7 | .78 | .92 | 55 | 1.7 |
| 10 | 196 | 35 | 35 | 37 | 35 | 36 | 132 | 1.6 | .80 | 1.0 | 54 | 1.6 |
| 11 | 192 | 36 | 35 | 37 | 35 | 36 | 131 | 1.5 | .85 | 1.3 | 53 | 1.6 |
| 12 | 193 | 36 | 36 | 38 | 35 | 36 | 130 | 1.5 | 26 | 17 | 52 | 1.7 |
| 13 | 187 | 36 | 36 | 39 | 35 | 36 | 124 | 1.5 | 53 | 33 | 52 | 1.8 |
| 14 | 183 | 36 | 36 | 39 | 35 | 37 | 52 | 1.6 | 51 | 123 | 24 | 1.9 |
| 15 | 175 | 36 | 37 | 39 | 35 | 36 | 4.1 | 1.6 | 51 | 177 | 1.4 | 28 |
| 16 | 130 | 37 | 37 | 39 | 34 | 36 | 3.6 | 1.5 | 22 | 145 | 1.4 | 52 |
| 17 | 86 | 39 | 37 | 48 | 34 | 36 | 2.9 | 1.3 | .90 | 100 | 1.6 | 52 |
| 18 | 113 | 59 | 37 | 61 | 33 | 38 | 2.0 | 1.2 | .90 | 43 | 1.6 | 50 |
| 19 | 138 | 84 | 37 | 60 | 33 | 43 | 1.9 | 1.2 | 1.1 | 2.9 | 1.6 | 50 |
| 20 | 135 | 87 | 37 | 59 | 35 | 43 | 2.0 | 1.2 | 1.3 | 2.6 | 1.6 | 50 |
| 21 | 132 | 87 | 37 | 58 | 35 | 87 | 1.9 | 1.2 | 1.3 | 2.6 | 1.6 | 50 |
| 22 | 130 | 86 | 38 | 59 | 35 | 125 | 2.7 | 1.2 | 1.9 | 2.4 | 1.9 | 51 |
| 23 | 128 | 86 | 38 | 58 | 35 | 122 | 30 | 1.3 | 29 | 2.4 | 1.8 | 50 |
| 24 | 120 | 85 | 38 | 58 | 35 | 119 | 50 | 1.3 | 53 | 2.2 | 2.0 | 50 |
| 25 | 118 | 83 | 39 | 58 | 35 | 90 | 56 | 1.4 | 54 | 14 | 2.0 | 52 |
| 26 | 114 | 82 | 39 | 58 | 35 | 56 | 91 | 1.4 | 89 | 54 | 1.9 | 52 |
| 27 | 109 | 81 | 39 | 58 | 35 | 56 | 107 | 1.3 | 122 | 75 | 1.8 | 52 |
| 28 | 107 | 80 | 39 | 57 | 35 | 56 | 120 | 1.3 | 53 | 71 | 1.7 | 51 |
| 29 | 103 | 80 | 39 | 46 | --- | 57 | 136 | 1.3 | 1.6 | 50 | 1.8 | 50 |
| 30 | 100 | 80 | 39 | 34 | --- | 59 | 137 | 1.3 | 1.6 | 25 | 1.8 | 50 |
| 31 | 79 | --- | 39 | 34 | --- | 75 | --- | 1.3 | --- | 13 | 1.9 | --- |
| TOTAL | 4676 | 2371 | 1540 | 1420 | 974 | 1627 | 2601.1 | 352.0 | 622.44 | 967.57 | 359.0 | 1191.1 |
| MEAN | 151 | 79.0 | 49.7 | 45.8 | 34.8 | 52.5 | 86.7 | 11.4 | 20.7 | 31.2 | 11.6 | 39.7 |
| MAX | 207 | 138 | 85 | 61 | 35 | 125 | 156 | 129 | 122 | 177 | 55 | 93 |
| MIN | 79 | 35 | 35 | 34 | 33 | 34 | 1.9 | 1.2 | .57 | .92 | 1.4 | 1.6 |

CAL YR 1985 TOTAL 22496.21 MEAN 61.6 MAX 207 MIN .37
WTR YR 1986 TOTAL 18701.21 MEAN 51.2 MAX 207 MIN .57



Base from U.S. Geological Survey
State base map, 1968

MENOMINEE-OCONTO-PESHTIGO RIVER BASIN

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## 04061000 BRULE RIVER NEAR FLORENCE, WI

LOCATION.--Lat 45°57'31", long 88°15'57", in SE 1/4 SE 1/4 sec.11, T.41 N., R.32 W., Michigan Meridian, Iron County, Hydrologic Unit 04030106, on left bank 40 ft upstream from highway bridge, 1.0 mi upstream from Paint River, 2.5 mi north of Florence, and 5.0 mi upstream from confluence with Michigamme River.

DRAINAGE AREA.--389 mi$^2$.

PERIOD OF RECORD.--January 1914 to February 1916, June 1944 to current year.

REVISED RECORDS.--WSP 1387: 1914-16. WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,200.55 ft National Geodetic Vertical Datum of 1929 (levels by Owen Ayres Associates). Prior to Aug. 29, 1944, nonrecording gage at bridge 40 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 21 to Mar. 29. Records excellent except for estimated daily discharges, which are fair. Discharge includes some mine pumpage prior to August 1977. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1915, 1945-86), 365 ft$^3$/s, 12.74 in/yr

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft$^3$/s July 2, 1953, gage height, 6.57 ft; maximum gage height, 8.60 ft Dec. 20, 1983, backwater from ice; minimum discharge, 118 ft$^3$/s Dec. 2, 1963 (discharge measurement); minimum gage height, 1.79 ft July 24, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,260 ft$^3$/s Apr. 2, gage height, 4.59 ft; maximum gage height, 6.94 ft Nov. 22, backwater from ice; minimum discharge, 233 ft$^3$/s July 10, 11, gage height, 2.04 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 982 | 463 | 430 | 390 | 350 | 305 | 1770 | 479 | 282 | 253 | 244 | 243 |
| 2 | 908 | 1150 | 400 | 385 | 350 | 310 | 2170 | 451 | 274 | 254 | 252 | 245 |
| 3 | 726 | 1400 | 430 | 385 | 350 | 310 | 2200 | 432 | 264 | 251 | 257 | 245 |
| 4 | 726 | 1280 | 460 | 380 | 350 | 310 | 1950 | 414 | 264 | 253 | 250 | 278 |
| 5 | 1090 | 976 | 490 | 375 | 350 | 315 | 1690 | 405 | 267 | 273 | 287 | 299 |
| 6 | 1310 | 784 | 510 | 365 | 345 | 320 | 1760 | 389 | 265 | 269 | 291 | 278 |
| 7 | 1260 | 675 | 510 | 360 | 340 | 315 | 1760 | 369 | 268 | 253 | 280 | 268 |
| 8 | 1010 | 595 | 470 | 360 | 330 | 300 | 1580 | 374 | 287 | 244 | 288 | 253 |
| 9 | 875 | 541 | 490 | 370 | 325 | 310 | 1320 | 380 | 277 | 244 | 302 | 248 |
| 10 | 767 | 497 | 500 | 370 | 320 | 330 | 1080 | 358 | 264 | 236 | 290 | 291 |
| 11 | 657 | 465 | 480 | 375 | 315 | 350 | 919 | 337 | 291 | 237 | 286 | 354 |
| 12 | 601 | 447 | 440 | 375 | 310 | 355 | 813 | 347 | 366 | 273 | 270 | 365 |
| 13 | 635 | 434 | 400 | 380 | 305 | 360 | 732 | 346 | 346 | 454 | 259 | 340 |
| 14 | 592 | 426 | 390 | 375 | 305 | 370 | 671 | 336 | 302 | 502 | 252 | 320 |
| 15 | 529 | 414 | 400 | 370 | 300 | 370 | 727 | 332 | 284 | 395 | 262 | 355 |
| 16 | 482 | 418 | 390 | 370 | 305 | 360 | 742 | 337 | 272 | 343 | 266 | 380 |
| 17 | 452 | 422 | 390 | 370 | 305 | 340 | 669 | 326 | 263 | 317 | 380 | 339 |
| 18 | 435 | 432 | 380 | 370 | 310 | 355 | 603 | 316 | 256 | 293 | 367 | 318 |
| 19 | 420 | 521 | 400 | 370 | 315 | 340 | 579 | 312 | 254 | 297 | 300 | 301 |
| 20 | 399 | 577 | 410 | 370 | 315 | 340 | 566 | 304 | 252 | 301 | 269 | 297 |
| 21 | 384 | 475 | 410 | 370 | 310 | 325 | 545 | 299 | 252 | 277 | 266 | 291 |
| 22 | 384 | 480 | 400 | 365 | 300 | 330 | 523 | 297 | 259 | 262 | 258 | 363 |
| 23 | 381 | 470 | 400 | 355 | 300 | 350 | 493 | 318 | 260 | 251 | 331 | 401 |
| 24 | 418 | 430 | 390 | 365 | 300 | 360 | 473 | 310 | 259 | 254 | 340 | 354 |
| 25 | 397 | 400 | 380 | 375 | 305 | 370 | 463 | 305 | 258 | 325 | 302 | 332 |
| 26 | 383 | 400 | 390 | 365 | 310 | 470 | 537 | 302 | 282 | 307 | 280 | 352 |
| 27 | 378 | 400 | 400 | 365 | 300 | 460 | 607 | 292 | 338 | 284 | 270 | 389 |
| 28 | 357 | 400 | 400 | 360 | 290 | 550 | 576 | 285 | 330 | 273 | 263 | 433 |
| 29 | 347 | 400 | 410 | 360 | --- | 630 | 533 | 283 | 299 | 262 | 252 | 475 |
| 30 | 343 | 400 | 390 | 355 | --- | 819 | 502 | 285 | 271 | 250 | 245 | 486 |
| 31 | 340 | --- | 390 | 350 | --- | 1160 | --- | 289 | --- | 252 | 244 | --- |
| TOTAL | 18968 | 17172 | 13130 | 11450 | 8910 | 12489 | 29553 | 10609 | 8406 | 8939 | 8703 | 9893 |
| MEAN | 612 | 572 | 424 | 369 | 318 | 403 | 985 | 342 | 280 | 288 | 281 | 330 |
| MAX | 1310 | 1400 | 510 | 390 | 350 | 1160 | 2200 | 479 | 366 | 502 | 380 | 486 |
| MIN | 340 | 400 | 380 | 350 | 290 | 300 | 463 | 283 | 252 | 236 | 244 | 243 |
| CFSM | 1.57 | 1.47 | 1.09 | .95 | .82 | 1.04 | 2.53 | .88 | .72 | .74 | .72 | .85 |
| IN. | 1.81 | 1.64 | 1.26 | 1.09 | .85 | 1.19 | 2.83 | 1.01 | .80 | .85 | .83 | .95 |

CAL YR 1985 TOTAL 152031 MEAN 417 MAX 1400 MIN 216 CFSM 1.07 IN 14.54
WTR YR 1986 TOTAL 158222 MEAN 433 MAX 2200 MIN 236 CFSM 1.11 IN 15.13

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## 04063000 MENOMINEE RIVER NEAR FLORENCE, WI

LOCATION.--Lat 45°57'04", long 88°11'13", in NE 1/4 sec.16, T.41 N., R.31 W., Michigan Meridian, Iron County, Hydrologic Unit 04030108, on left bank 0.5 mi downstream from confluence of Brule and Michigamme Rivers, 3.5 mi northeast of Florence, and at mile 117.

DRAINAGE AREA.--1,780 $mi^2$.

PERIOD OF RECORD.--January 1914 to current year. Published as "at Twin Falls near Iron Mountain, MI" 1914-57. Records published for both sites July 1950 to September 1957.

REVISED RECORDS.--WSP 1707: 1953(M). WSP 1911: Drainage area of former site.

GAGE.--Water-stage recorder. Datum of gage is 1,119.23 ft above National Geodetic Vertical Datum of 1929 (levels by Owen Ayres Associates). Prior to July 1950, headwater and tailwater gages and generation data entered hourly in daily log sheets by company employees at the Twin Falls Powerplant of Wisconsin Electric Power Co., 10.4 mi downstream.

REMARKS.--Estimated daily discharges: Oct. 6-10 and Nov. 2-5. Records excellent except for estimated daily discharges, which are fair. Prior to July 1950, discharge determined from powerplant records computed on basis of load-discharge rating of hydroelectric units and rating for tail-water gage during periods of spill. Rating developed by Geological Survey. Flow regulated by powerplants, Michigamme Reservoir, capacity, 119,950 acre-ft, and Peavy Pond, capacity, 33,860 acre-ft, on Michigamme River, and by many smaller reservoirs upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--72 years, 1,829 $ft^3/s$.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 $ft^3/s$ Apr. 26, 1960, gage height, 14.15 ft; minimum, 38 $ft^3/s$ Aug. 21, 1962, Sept. 26, 1975; minimum gage height, 1.18 ft Aug. 21, 1962, Nov. 4, 1965; minimum daily discharge, 57 $ft^3/s$ Sept. 26, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 $ft^3/s$ Apr. 7, 8, gage height, 9.79 ft; minimum, 273 $ft^3/s$, July 22, gage height, 2.06 ft; minimum daily, 450 $ft^3/s$ July 11.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3530 | 2680 | 2600 | 1990 | 2080 | 2700 | 5220 | 3850 | 919 | 889 | 1510 | 1800 |
| 2 | 3890 | 5000 | 2330 | 1970 | 2080 | 2620 | 7030 | 3720 | 969 | 971 | 1480 | 1760 |
| 3 | 3750 | 7900 | 2510 | 1970 | 2090 | 2510 | 8220 | 3600 | 1050 | 891 | 1620 | 1880 |
| 4 | 3910 | 7500 | 2990 | 2120 | 1980 | 2480 | 8560 | 3510 | 1200 | 904 | 1530 | 1930 |
| 5 | 4370 | 6900 | 3050 | 2120 | 1910 | 2110 | 8220 | 3500 | 1090 | 694 | 1580 | 1780 |
| 6 | 6200 | 5260 | 3040 | 2040 | 2060 | 1810 | 8820 | 3170 | 1330 | 741 | 1680 | 1650 |
| 7 | 6500 | 4350 | 3040 | 2040 | 1840 | 1790 | 9170 | 2880 | 1010 | 778 | 1600 | 1490 |
| 8 | 7200 | 3960 | 3100 | 2140 | 1820 | 1450 | 9930 | 2300 | 952 | 784 | 1360 | 1460 |
| 9 | 6800 | 3420 | 2930 | 2130 | 1950 | 1380 | 8690 | 2030 | 1170 | 993 | 1260 | 1190 |
| 10 | 4500 | 3310 | 2800 | 2050 | 2030 | 1410 | 6800 | 1690 | 1250 | 940 | 1410 | 1190 |
| 11 | 4030 | 2970 | 2810 | 2010 | 2380 | 1370 | 5050 | 1720 | 1260 | 450 | 1450 | 1220 |
| 12 | 4250 | 2910 | 3000 | 1850 | 2580 | 1450 | 3510 | 1850 | 1160 | 723 | 1460 | 1280 |
| 13 | 4540 | 3080 | 2730 | 2080 | 2610 | 1570 | 3240 | 1570 | 1000 | 734 | 1510 | 1330 |
| 14 | 4530 | 3060 | 2710 | 2040 | 2680 | 1940 | 3160 | 1610 | 1130 | 955 | 1510 | 1320 |
| 15 | 4090 | 3050 | 2640 | 2040 | 2740 | 1740 | 2480 | 1610 | 1150 | 822 | 1510 | 1390 |
| 16 | 3010 | 3140 | 2650 | 2070 | 2730 | 1610 | 2660 | 1630 | 1110 | 936 | 1670 | 1420 |
| 17 | 3000 | 3030 | 2510 | 2080 | 2740 | 1440 | 2850 | 1200 | 981 | 1040 | 1520 | 1440 |
| 18 | 2930 | 3220 | 2150 | 2050 | 2740 | 1620 | 3140 | 1130 | 1100 | 982 | 1510 | 1470 |
| 19 | 2910 | 3180 | 2240 | 1970 | 2630 | 1590 | 3130 | 1300 | 1110 | 973 | 1400 | 1500 |
| 20 | 2920 | 3080 | 2160 | 2070 | 2620 | 1580 | 2910 | 1550 | 1150 | 768 | 1480 | 1360 |
| 21 | 2320 | 2670 | 2340 | 2080 | 2570 | 1550 | 3090 | 1360 | 916 | 840 | 1530 | 1130 |
| 22 | 1830 | 2170 | 2030 | 1960 | 2670 | 1530 | 3100 | 1500 | 775 | 866 | 1450 | 1070 |
| 23 | 1720 | 2030 | 2080 | 2070 | 2530 | 1660 | 2970 | 1260 | 939 | 884 | 1340 | 1110 |
| 24 | 1770 | 2400 | 1780 | 2060 | 2710 | 1730 | 2450 | 979 | 1050 | 980 | 1430 | 1060 |
| 25 | 2090 | 2260 | 1830 | 2000 | 2560 | 1650 | 2550 | 899 | 868 | 1380 | 1350 | 1050 |
| 26 | 2170 | 2450 | 2100 | 2090 | 2650 | 2180 | 3090 | 601 | 980 | 1270 | 1320 | 903 |
| 27 | 2150 | 2070 | 1990 | 2160 | 2580 | 2140 | 3200 | 1190 | 1030 | 1270 | 1300 | 1150 |
| 28 | 2040 | 2210 | 1970 | 2040 | 2560 | 2330 | 3330 | 1340 | 872 | 1390 | 1570 | 1270 |
| 29 | 2260 | 2410 | 2070 | 2170 | --- | 2610 | 3730 | 1200 | 618 | 1440 | 1780 | 1480 |
| 30 | 2220 | 2290 | 2050 | 2000 | --- | 3320 | 3940 | 1050 | 954 | 1310 | 1720 | 1550 |
| 31 | 2220 | --- | 2240 | 2100 | -- | 3620 | --- | 815 | --- | 1260 | 1880 | --- |
| TOTAL | 109650 | 103960 | 76470 | 63560 | 67120 | 60490 | 144240 | 57614 | 31093 | 29858 | 46720 | 41633 |
| MEAN | 3537 | 3465 | 2467 | 2050 | 2397 | 1951 | 4808 | 1859 | 1036 | 963 | 1507 | 1388 |
| MAX | 7200 | 7900 | 3100 | 2170 | 2740 | 3620 | 9930 | 3850 | 1330 | 1440 | 1880 | 1930 |
| MIN | 1720 | 2030 | 1780 | 1850 | 1820 | 1370 | 2450 | 601 | 618 | 450 | 1260 | 903 |

CAL YR 1985 TOTAL 891903 MEAN 2444 MAX 11700 MIN 890
WTR YR 1986 TOTAL 832408 MEAN 2281 MAX 9930 MIN 450

## 04063700 POPPLE RIVER NEAR FENCE, WI
## (HYDROLOGIC BENCHMARK STATION)

LOCATION.--Lat 45°45'49", long 88°27'47", in NW 1/4 sec.23, T.38 N., R.16 E., Florence County, Hydrologic Unit 04030108, on left bank 20 ft upstream from bridge on U. S. Forest Service Road 2159, 1.8 mi downstream from Mud Creek, 2.6 mi northwest of Fence, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--139 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WDR WI-76-1: 1972(M). WDR WI-80-1: Drainage area. WDR WI-81-1: 1965 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,406.16 ft above National Geodetic Vertical Datum of 1929. Prior to June 18, 1964, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--23 years, 126 ft$^3$/s, 12.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft$^3$/s Apr. 25, 1979, gage height, 4.52 ft; minimum, 5.9 ft$^3$/s Oct. 28, 1976, gage height, 0.75 ft, result of temporary storage from beaver dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 7 | 0500 | 518 | 2.84 | Apr. 7 | 2000 | *1,100 | *3.95 |
| Nov. 4 | 1300 | 491 | 2.78 | July 20 | 1000 | 370 | 2.49 |

Minimum discharge, 34 ft$^3$/s part of each day Sept. 2, 3, gage height, 1.20 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Nov. 19-25, Dec. 3 to Jan. 18, Jan. 23 to Mar. 3, Mar. 8-14, 20-24, 26-30.)

| | | | |
|---|---|---|---|
| 1.2 | 34 | 2.4 | 334 |
| 1.4 | 53 | 2.8 | 500 |
| 1.6 | 88 | 3.3 | 735 |
| 2.0 | 188 | 4.0 | 1,130 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 370 | 124 | 93 | 78 | 72 | 62 | 535 | 172 | 42 | 68 | 75 | 40 |
| 2 | 399 | 330 | 85 | 78 | 72 | 64 | 602 | 166 | 39 | 57 | 72 | 37 |
| 3 | 386 | 420 | 90 | 78 | 72 | 66 | 704 | 156 | 37 | 49 | 70 | 35 |
| 4 | 405 | 483 | 94 | 80 | 74 | 67 | 763 | 142 | 38 | 48 | 65 | 63 |
| 5 | 470 | 482 | 98 | 80 | 74 | 67 | 829 | 129 | 39 | 56 | 59 | 55 |
| 6 | 500 | 455 | 100 | 80 | 74 | 66 | 1010 | 118 | 36 | 58 | 54 | 52 |
| 7 | 511 | 417 | 100 | 76 | 72 | 65 | 1070 | 103 | 37 | 53 | 52 | 46 |
| 8 | 485 | 385 | 98 | 74 | 72 | 64 | 1080 | 89 | 38 | 48 | 50 | 40 |
| 9 | 431 | 355 | 94 | 76 | 72 | 64 | 996 | 81 | 38 | 43 | 48 | 37 |
| 10 | 405 | 299 | 90 | 78 | 72 | 64 | 881 | 81 | 37 | 40 | 48 | 52 |
| 11 | 380 | 233 | 86 | 76 | 72 | 64 | 760 | 78 | 41 | 38 | 50 | 112 |
| 12 | 351 | 207 | 84 | 74 | 70 | 68 | 643 | 73 | 49 | 41 | 50 | 165 |
| 13 | 324 | 184 | 82 | 72 | 70 | 70 | 549 | 71 | 49 | 69 | 45 | 164 |
| 14 | 280 | 154 | 80 | 72 | 68 | 70 | 475 | 73 | 44 | 111 | 44 | 142 |
| 15 | 247 | 132 | 80 | 72 | 64 | 70 | 457 | 71 | 41 | 129 | 46 | 157 |
| 16 | 218 | 116 | 78 | 74 | 64 | 69 | 430 | 73 | 40 | 132 | 46 | 179 |
| 17 | 189 | 125 | 78 | 78 | 64 | 71 | 392 | 81 | 37 | 124 | 46 | 184 |
| 18 | 165 | 129 | 78 | 80 | 66 | 70 | 355 | 72 | 36 | 125 | 45 | 174 |
| 19 | 147 | 160 | 76 | 76 | 66 | 70 | 324 | 70 | 39 | 300 | 43 | 165 |
| 20 | 130 | 160 | 74 | 75 | 66 | 72 | 299 | 63 | 42 | 365 | 41 | 154 |
| 21 | 116 | 150 | 74 | 74 | 64 | 72 | 276 | 57 | 42 | 309 | 40 | 138 |
| 22 | 105 | 150 | 74 | 70 | 62 | 74 | 244 | 53 | 42 | 184 | 40 | 167 |
| 23 | 102 | 140 | 78 | 68 | 60 | 80 | 210 | 52 | 43 | 128 | 46 | 190 |
| 24 | 110 | 140 | 78 | 68 | 60 | 86 | 184 | 52 | 47 | 103 | 52 | 191 |
| 25 | 112 | 130 | 74 | 70 | 60 | 95 | 168 | 52 | 47 | 119 | 52 | 180 |
| 26 | 111 | 119 | 74 | 70 | 60 | 140 | 174 | 50 | 77 | 109 | 49 | 173 |
| 27 | 101 | 114 | 76 | 68 | 60 | 160 | 195 | 49 | 145 | 96 | 45 | 181 |
| 28 | 98 | 108 | 76 | 70 | 60 | 170 | 197 | 45 | 161 | 112 | 44 | 188 |
| 29 | 89 | 103 | 78 | 72 | --- | 230 | 185 | 44 | 121 | 111 | 41 | 185 |
| 30 | 85 | 99 | 78 | 72 | --- | 360 | 171 | 42 | 88 | 102 | 39 | 167 |
| 31 | 81 | --- | 80 | 72 | --- | 448 | --- | 47 | --- | 87 | 38 | --- |
| TOTAL | 7903 | 6603 | 2578 | 2301 | 1882 | 3258 | 15158 | 2505 | 1612 | 3414 | 1535 | 3813 |
| MEAN | 255 | 220 | 83.2 | 74.2 | 67.2 | 105 | 505 | 80.8 | 53.7 | 110 | 49.5 | 127 |
| MAX | 511 | 483 | 100 | 80 | 74 | 448 | 1080 | 172 | 161 | 365 | 75 | 191 |
| MIN | 81 | 99 | 74 | 68 | 60 | 62 | 168 | 42 | 36 | 38 | 38 | 35 |
| CFSM | 1.84 | 1.58 | .60 | .53 | .48 | .76 | 3.63 | .58 | .39 | .79 | .36 | .91 |
| IN. | 2.12 | 1.77 | .69 | .62 | .50 | .87 | 4.06 | .67 | .43 | .91 | .41 | 1.02 |

CAL YR 1985 TOTAL 50845 MEAN 139 MAX 690 MIN 31 CFSM 1.00 IN 13.61
WTR YR 1986 TOTAL 52562 MEAN 144 MAX 1080 MIN 35 CFSM 1.04 IN 14.07

### 04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED
(HYDROLOGIC BENCH-MARK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1964 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | DISCHARGE, IN CUBIC FEET PER SECOND (00060) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | |
| 13... | 1250 | 182 | -- | 91 | 7.40 | .5 | 1.5 | 12.7 | 734 | 91 |
| JAN , 1986 | | | | | | | | | | |
| 29... | 1400 | -- | 72 | 225 | 7.50 | 0.0 | 1.9 | -- | 732 | -- |
| APR | | | | | | | | | | |
| 22... | 1400 | 240 | -- | 82 | 7.60 | 8.5 | .50 | 11.0 | 733 | 98 |
| AUG | | | | | | | | | | |
| 07... | 1345 | 52 | -- | 194 | 8.20 | 21.0 | 2.0 | 8.9 | 729 | 105 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | |
| 13... | K10 | K14 | 45 | 11 | 9.4 | 5.2 | 1.1 | 5 | .0 | .40 |
| JAN , 1986 | | | | | | | | | | |
| 29... | 20 | K8 | 100 | 13 | 22 | 12 | 1.7 | 3 | .0 | .80 |
| APR | | | | | | | | | | |
| 22... | -- | -- | 42 | 8 | 9.0 | 4.7 | 1.0 | 5 | .0 | .50 |
| AUG | | | | | | | | | | |
| 07... | 32 | K15 | 98 | 12 | 21 | 11 | 1.5 | 3 | .0 | .80 |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | |
| 13... | 41 | -- | 33 | 2.6 | 7.9 | 3.0 | <.10 | 7.9 | 69 |
| JAN , 1986 | | | | | | | | | |
| 29... | 112 | -- | 90 | 5.6 | 10 | 1.5 | <.10 | 15 | 117 |
| APR | | | | | | | | | |
| 22... | 41 | -- | 33 | 1.6 | 14 | 1.2 | <.10 | 4.7 | 60 |
| AUG | | | | | | | | | |
| 07... | 105 | -- | 84 | 1.1 | 11 | 1.3 | .20 | 10 | 132 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | |
| 13... | 56 | .09 | 34 | <.10 | .030 | .60 | .010 | .010 | .010 |
| JAN , 1986 | | | | | | | | | |
| 29... | 120 | .16 | 22 | .23 | .100 | .50 | .020 | .010 | .020 |
| APR | | | | | | | | | |
| 22... | 55 | .08 | 39 | <.10 | .040 | .50 | .020 | .010 | <.010 |
| AUG | | | | | | | | | |
| 07... | 110 | .18 | 19 | <.10 | .020 | .80 | .020 | .020 | <.010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | | |
| 13... | 1250 | 182 | -- | 70 | <1 | 10 | 1.5 | 2 | <1 | <3 | 1 |
| JAN , 1986 | | | | | | | | | | | |
| 29... | 1400 | -- | 72 | 10 | <1 | 11 | <.5 | <1 | <1 | <3 | <1 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGANESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELENIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANADIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | | |
| 13... | 360 | 13 | <4 | 20 | .1 | <10 | 1 | <1 | 14 | <6 | 9 |
| JAN , 1986 | | | | | | | | | | | |
| 29... | 390 | 1 | 5 | 53 | <.1 | <10 | <1 | <1 | 24 | <6 | 13 |

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030) | GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040) | GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515) | GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050) | GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) (80060) | RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511) | URANIUM DIS-SOLVED, EXTRACTION (UG/L) (80020) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | |
| 22... | 1400 | 240 | -- | <.4 | .7 | .9 | .8 | <.7 | .02 | <.14 |

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | SEDIMENT, SUS-PENDED (MG/L) (80154) | SEDIMENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 02... | 1300 | 410 | -- | 98 | 7.5 | -- | -- | -- |
| NOV | | | | | | | | |
| 13... | 1250 | 182 | -- | 91 | .5 | 2 | 1 | 77 |
| DEC | | | | | | | | |
| 17... | 1300 | 79 | -- | 175 | .0 | -- | -- | -- |
| JAN , 1986 | | | | | | | | |
| 29... | 1400 | -- | 72 | 225 | .0 | -- | -- | -- |
| MAR | | | | | | | | |
| 11... | 1425 | 65 | -- | 257 | .0 | -- | -- | -- |
| APR | | | | | | | | |
| 03... | 1155 | 714 | -- | 65 | 2.0 | -- | -- | -- |
| 22... | 1400 | 240 | -- | 82 | 8.5 | 2 | 1 | 76 |
| JUN | | | | | | | | |
| 23... | 1645 | 40 | -- | 225 | 22.0 | -- | -- | -- |
| AUG | | | | | | | | |
| 07... | 1345 | 52 | -- | 194 | 21.0 | -- | -- | -- |
| 07... | 1415 | 51 | -- | -- | 21.0 | -- | -- | -- |

## 04066003 MENOMINEE RIVER BELOW PEMENE CREEK NEAR PEMBINE, WI

LOCATION.--Lat 45°34'46", long 87°47'13", in NE 1/4, sec.29, T. 37 N., R.28 W., Michigan Meridian, Menominee County, MI, Hydrologic Unit 04030108, on left bank 40 ft downstream from County Trunk Z bridge, 0.9 mi downstream from Pemene Creek, 3.9 mi west of Nathan, MI, 10.6 mi southeast of Pembine, and at mile 64.3.

DRAINAGE AREA.--3,140 mi$^2$.

PERIOD OF RECORD.--October 1949 to current year. Published as "near Pembine" prior to August 1982. Monthly discharges only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Elevation of gage is 740 ft, from topographic map. October 1949 to Oct. 27, 1972, water-stage recorder at site 1.0 mi upstream at different datum, and Oct. 28, 1972, to August 1982, water-stage recorder at site 1.5 mi upstream at different datum.

REMARKS.--Estimated daily discharges: None, except those for ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Flow regulated by powerplants and by Michigamme Reservoir, capacity, 119,950 acre-ft, and Peavy Pond, capacity, 33,860 acre-ft, on the Michigamme River, and by many smaller reservoirs above station.

AVERAGE DISCHARGE.--37 years, 3,038 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft$^3$/s May 8, 1960, gage height, 13.90 ft site and datum then in use; minimum, 694 ft$^3$/s Sept. 3, 1969, gage height, 1.66 ft site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,400 ft$^3$/s Apr. 7, gage height, 14.72 ft; maximum gage height, 18.94 ft Dec. 17, backwater from ice; minimum daily, 1,180 ft$^3$/s July 13.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 24 to Mar. 31.)

| | | | |
|---|---|---|---|
| 7.0 | 1,140 | 11.0 | 7,740 |
| 8.0 | 2,370 | 13.0 | 12,900 |
| 9.0 | 3,840 | 15.0 | 19,300 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6830 | 3550 | 4100 | 3100 | 3000 | 3900 | 10700 | 5680 | 1780 | 1630 | 1940 | 2270 |
| 2 | 6840 | 7030 | 4100 | 3100 | 3000 | 3900 | 14200 | 5100 | 1750 | 1900 | 2080 | 2190 |
| 3 | 6220 | 12100 | 4000 | 3200 | 3000 | 3800 | 15000 | 5200 | 2140 | 1620 | 2000 | 2370 |
| 4 | 6690 | 13300 | 4500 | 3100 | 3000 | 4000 | 15200 | 4730 | 1910 | 1330 | 2270 | 2510 |
| 5 | 8340 | 12000 | 5000 | 2900 | 3000 | 4000 | 15600 | 4490 | 1930 | 1360 | 2100 | 2590 |
| 6 | 9330 | 10100 | 5400 | 2900 | 3000 | 3500 | 16200 | 4640 | 1820 | 1350 | 2030 | 2340 |
| 7 | 10500 | 7860 | 5400 | 3100 | 3000 | 3000 | 18200 | 4290 | 1600 | 1310 | 2260 | 2150 |
| 8 | 10700 | 6960 | 5200 | 3100 | 2800 | 2500 | 17900 | 3650 | 1560 | 1370 | 2190 | 2010 |
| 9 | 10300 | 6310 | 5000 | 3000 | 2800 | 2400 | 16800 | 3180 | 1980 | 1390 | 1830 | 1740 |
| 10 | 8700 | 5160 | 4900 | 3100 | 2900 | 2300 | 13800 | 2800 | 1740 | 1420 | 2090 | 1780 |
| 11 | 6380 | 4820 | 4800 | 3100 | 3000 | 2300 | 11200 | 2740 | 1770 | 1360 | 2040 | 2030 |
| 12 | 6360 | 4610 | 4800 | 3100 | 3500 | 2300 | 8360 | 2650 | 2010 | 1210 | 1950 | 2350 |
| 13 | 6880 | 4670 | 4700 | 3100 | 3700 | 2400 | 7420 | 2750 | 2080 | 1180 | 1980 | 2650 |
| 14 | 6920 | 4550 | 4500 | 3100 | 3700 | 2500 | 6220 | 2700 | 1940 | 1310 | 1970 | 2490 |
| 15 | 6090 | 4320 | 4200 | 3100 | 3700 | 3000 | 5800 | 2630 | 2010 | 1970 | 1980 | 2410 |
| 16 | 4980 | 4250 | 4000 | 3100 | 3600 | 3000 | 5770 | 2740 | 1860 | 1890 | 1910 | 2780 |
| 17 | 4720 | 4400 | 3700 | 3100 | 3600 | 2700 | 5840 | 2380 | 1750 | 1770 | 2260 | 2660 |
| 18 | 4190 | 4460 | 3500 | 3000 | 3600 | 2500 | 5720 | 2200 | 1710 | 1760 | 2250 | 2710 |
| 19 | 4180 | 5030 | 3400 | 3000 | 3700 | 2800 | 5640 | 2140 | 1720 | 1830 | 1980 | 2630 |
| 20 | 4260 | 5690 | 3300 | 3000 | 3800 | 2500 | 5660 | 2390 | 1670 | 1810 | 1880 | 2580 |
| 21 | 4260 | 5570 | 3300 | 3000 | 3800 | 2800 | 5310 | 2240 | 1470 | 1790 | 1980 | 2210 |
| 22 | 3320 | 4670 | 3300 | 3000 | 3900 | 3100 | 5180 | 2510 | 1240 | 1900 | 1980 | 2290 |
| 23 | 2790 | 4160 | 3300 | 3000 | 3900 | 2900 | 4480 | 2310 | 1490 | 1740 | 1880 | 2440 |
| 24 | 2880 | 4000 | 3200 | 3000 | 3700 | 2900 | 4630 | 2100 | 1640 | 1680 | 1730 | 2430 |
| 25 | 3320 | 3800 | 2900 | 3000 | 3700 | 3200 | 4100 | 1820 | 1620 | 1660 | 1780 | 2420 |
| 26 | 3250 | 3700 | 2800 | 3000 | 3900 | 3500 | 4470 | 1830 | 1640 | 1800 | 1940 | 2310 |
| 27 | 3310 | 3900 | 2800 | 2800 | 3900 | 3700 | 4770 | 1750 | 1970 | 2030 | 1930 | 2550 |
| 28 | 3290 | 4100 | 3000 | 2800 | 3900 | 4000 | 5290 | 2070 | 2040 | 2240 | 2010 | 2340 |
| 29 | 3280 | 4000 | 3000 | 3000 | --- | 4700 | 5310 | 2090 | 1950 | 2050 | 2110 | 3000 |
| 30 | 3210 | 3900 | 3000 | 3100 | --- | 5600 | 5590 | 2170 | 1680 | 1980 | 2140 | 2820 |
| 31 | 3130 | --- | 3000 | 3100 | --- | 8000 | --- | 1990 | --- | 2080 | 2270 | --- |
| TOTAL | 175450 | 172970 | 122100 | 94100 | 96100 | 103700 | 270360 | 91960 | 53470 | 51720 | 62740 | 72050 |
| MEAN | 5660 | 5766 | 3939 | 3035 | 3432 | 3345 | 9012 | 2966 | 1782 | 1668 | 2024 | 2402 |
| MAX | 10700 | 13300 | 5400 | 3200 | 3900 | 8000 | 18200 | 5680 | 2140 | 2240 | 2270 | 3000 |
| MIN | 2790 | 3550 | 2800 | 2800 | 2800 | 2300 | 4100 | 1750 | 1240 | 1180 | 1730 | 1740 |

CAL YR 1985 TOTAL 1382920 MEAN 3789 MAX 16100 MIN 1200
WTR YR 1986 TOTAL 1366720 MEAN 3744 MAX 18200 MIN 1180

## 04067500 MENOMINEE RIVER NEAR MC ALLISTER, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 45°19'33", long 87°39'48", in SW 1/4 SE 1/4 sec.17, T.33 N., R.23 E., Marinette County, Hydrologic Unit 04030108, on right bank 85 ft downstream from bridge on County Highway JJ, 2.9 mi downstream from Grand Rapids Dam, 2.6 mi east of McAllister, 1.9 mi downstream from Little Cedar River, and at mile 22.6.

DRAINAGE AREA.--3,930 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1945 to September 1961; October 1961 to September 1979, miscellaneous measurements and peaks only; October 1979 to September 1986 (discontinued as a continuous-record station; converted to a crest-stage partial-record station).

REVISED RECORDS.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 622.20 ft above National Geodetic Vertical Datum of 1929 (Michigan Department of Transportation reference mark). Prior to May 15, 1945, nonrecording gage 1,400 ft downstream at same datum; May 16, 1945, to September 1961, water-stage recorder 1,000 ft downstream at same datum; October 1961 to September 1979, crest-stage gage 1,100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Flow regulated by powerplants, by Michigamme Reservoir, capacity, 119,950 acre-ft, and Peavy Pond, capacity, 33,860 acre-ft on the Michigamme River, and by many smaller reservoirs above station.

AVERAGE DISCHARGE.--23 years (water years 1946-61, 1980-86), 3,577 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft$^3$/s May 9, 1960, gage height, 20.0 ft, from graph based on gage readings; minimum observed, 538 ft$^3$/s Oct. 6, 1946, gage height, 7.29 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,300 ft$^3$/s Apr. 8, gage height, 17.95 ft; minimum daily, 1,260 ft$^3$/s July 14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Apr. 3.)

| | | | |
|---|---|---|---|
| 8.5 | 1,190 | 12.0 | 6,400 |
| 9.0 | 1,740 | 14.0 | 10,500 |
| 9.5 | 2,360 | 16.0 | 15,900 |
| 10.0 | 3,040 | 18.0 | 22,500 |
| 11.0 | 4,600 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5930 | 4210 | 4300 | 4300 | 3600 | 4300 | 12000 | 6060 | 1770 | 1930 | 2300 | 2250 |
| 2 | 8170 | 7230 | 4200 | 4000 | 3600 | 4200 | 14000 | 6730 | 1850 | 1880 | 2260 | 2580 |
| 3 | 8210 | 11500 | 4300 | 4200 | 3400 | 4100 | 18000 | 6010 | 1950 | 1880 | 2220 | 2320 |
| 4 | 7660 | 15200 | 4500 | 3900 | 3500 | 4100 | 19100 | 5660 | 1810 | 2040 | 2330 | 2630 |
| 5 | 8540 | 16500 | 5000 | 3700 | 3400 | 4200 | 18600 | 5460 | 2030 | 1550 | 2490 | 2770 |
| 6 | 10400 | 15200 | 5600 | 3800 | 3500 | 4100 | 19200 | 5200 | 1920 | 1540 | 2420 | 2820 |
| 7 | 11600 | 12400 | 5800 | 3900 | 3500 | 3500 | 20600 | 5090 | 1850 | 1680 | 2260 | 2440 |
| 8 | 12000 | 9970 | 6000 | 3700 | 3500 | 3000 | 22000 | 4950 | 1650 | 1720 | 2580 | 2390 |
| 9 | 12400 | 8560 | 6000 | 3500 | 3400 | 2700 | 21800 | 4100 | 1720 | 1550 | 2500 | 2140 |
| 10 | 11500 | 7750 | 6000 | 3600 | 3500 | 2600 | 20200 | 3700 | 1980 | 1370 | 2280 | 2150 |
| 11 | 9900 | 6520 | 5800 | 3700 | 3500 | 2600 | 16900 | 3170 | 2050 | 1550 | 2300 | 2140 |
| 12 | 7690 | 5930 | 5400 | 3700 | 3600 | 2500 | 13200 | 3060 | 2300 | 1630 | 2540 | 2440 |
| 13 | 7630 | 5890 | 5200 | 3600 | 4000 | 2600 | 10100 | 3370 | 2360 | 1270 | 2240 | 2810 |
| 14 | 8040 | 5950 | 4800 | 3700 | 4100 | 2800 | 9360 | 3180 | 2350 | 1260 | 2250 | 3040 |
| 15 | 7540 | 5540 | 4600 | 3600 | 4100 | 2900 | 7210 | 3260 | 2410 | 1760 | 2380 | 2910 |
| 16 | 7000 | 5740 | 4400 | 3600 | 4000 | 3100 | 7880 | 3110 | 2220 | 2590 | 2150 | 3010 |
| 17 | 5720 | 5660 | 4400 | 3600 | 3900 | 3000 | 7570 | 3190 | 2110 | 2100 | 2250 | 3230 |
| 18 | 5330 | 5800 | 4000 | 3800 | 4200 | 3100 | 7400 | 2940 | 2210 | 2130 | 2540 | 3160 |
| 19 | 4930 | 6050 | 4200 | 3600 | 4300 | 3200 | 7250 | 2740 | 1920 | 2060 | 2480 | 3160 |
| 20 | 4750 | 6970 | 4200 | 3700 | 4100 | 3500 | 7110 | 2820 | 1860 | 2130 | 2220 | 2960 |
| 21 | 4930 | 7440 | 4200 | 3700 | 4200 | 3300 | 6710 | 2910 | 1640 | 2120 | 2150 | 2960 |
| 22 | 4910 | 7390 | 4100 | 3600 | 4100 | 3500 | 6680 | 2330 | 1760 | 2150 | 2240 | 2780 |
| 23 | 3600 | 6170 | 4100 | 3600 | 4000 | 3600 | 6410 | 2780 | 1590 | 2090 | 2200 | 2970 |
| 24 | 3530 | 5960 | 4000 | 3800 | 3800 | 3600 | 5160 | 2740 | 1570 | 1940 | 2040 | 3250 |
| 25 | 3870 | 4930 | 3900 | 3500 | 4000 | 3600 | 5170 | 2170 | 1830 | 1990 | 1890 | 3080 |
| 26 | 3970 | 3100 | 3500 | 3500 | 4100 | 4000 | 5640 | 1940 | 1850 | 2040 | 1890 | 3120 |
| 27 | 4180 | 3700 | 3600 | 3500 | 4200 | 5000 | 5550 | 1960 | 2350 | 2090 | 2300 | 3230 |
| 28 | 3940 | 4000 | 3600 | 3300 | 4300 | 5400 | 5700 | 2050 | 2780 | 2550 | 2000 | 3890 |
| 29 | 3960 | 4300 | 3800 | 3400 | --- | 7000 | 5940 | 2250 | 2630 | 2370 | 2160 | 4070 |
| 30 | 3750 | 4400 | 3900 | 3400 | --- | 9000 | 6930 | 2230 | 2440 | 2520 | 2310 | 4970 |
| 31 | 3810 | --- | 4000 | 3400 | --- | 10000 | --- | 2130 | --- | 2390 | 2350 | --- |
| TOTAL | 209390 | 219960 | 141400 | 113900 | 107400 | 124100 | 339370 | 109290 | 60760 | 59870 | 70520 | 87670 |
| MEAN | 6755 | 7332 | 4561 | 3674 | 3836 | 4003 | 11310 | 3525 | 2025 | 1931 | 2275 | 2922 |
| MAX | 12400 | 16500 | 6000 | 4300 | 4300 | 10000 | 22000 | 6730 | 2780 | 2590 | 2580 | 4970 |
| MIN | 3530 | 3100 | 3500 | 3300 | 3400 | 2500 | 5160 | 1940 | 1570 | 1260 | 1890 | 2140 |

CAL YR 1985 TOTAL 1654640 MEAN 4533 MAX 17300 MIN 1810
WTR YR 1986 TOTAL 1643630 MEAN 4503 MAX 22000 MIN 1260

## 04067500 MENOMINEE RIVER NEAR MC ALLISTER, WI--CONTINUED
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1977 to September 1986 (discontinued).

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 14... | 1210 | 5950 | -- | 181 | 7.90 | 2.0 | 1.5 | 13.6 | 756 | 99 |
| DEC 18... | 1030 | -- | 4000 | 249 | 7.70 | .0 | 3.5 | 13.8 | 756 | 95 |
| MAR , 1986 12... | 1120 | -- | 2500 | 286 | 7.80 | .0 | 1.5 | 12.7 | 755 | 88 |
| APR 23... | 1215 | 6420 | -- | 165 | 8.00 | 9.0 | 1.7 | 11.3 | 754 | 99 |
| JUN 24... | 1340 | 1590 | -- | 268 | 8.30 | 21.0 | 2.0 | 8.5 | 755 | 96 |
| AUG 06... | 1310 | 2760 | -- | 257 | 8.20 | 23.5 | 1.5 | 7.6 | 751 | 91 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 14... | 39 | K14 | 87 | 12 | 20 | 9.1 | 2.2 | 5 | .1 | .80 |
| DEC 18... | K70 | 32 | 96 | 9 | 22 | 10 | 4.1 | 8 | .2 | 1.0 |
| MAR , 1986 12... | K19 | K19 | 120 | 18 | 27 | 13 | 6.3 | 10 | .3 | 1.4 |
| APR 23... | -- | -- | 80 | 14 | 18 | 8.4 | 3.2 | 8 | .2 | 1.0 |
| JUN 24... | K8 | -- | 120 | 9 | 27 | 12 | 8.1 | 13 | .3 | 1.3 |
| AUG 06... | K9 | 23 | 120 | 25 | 27 | 12 | 7.7 | 12 | 3 | 1.5 |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 14... | 92 | -- | 74 | 1.8 | 8.8 | 10 | <.10 | 7.7 | 121 |
| DEC 18... | 106 | -- | 85 | 3.4 | 14 | 5.3 | <.10 | 10 | 128 |
| MAR , 1986 12... | 126 | -- | 101 | 3.2 | 14 | 6.2 | .10 | 11 | 138 |
| APR 23... | 80 | -- | 64 | 1.3 | 12 | 3.7 | .20 | 6.5 | 112 |
| JUN 24... | 127 | 2.0 | 104 | 1.0 | 17 | 8.2 | .10 | 5.2 | 157 |
| AUG 06... | 112 | -- | 90 | 1.1 | 18 | 7.9 | <.10 | 7.4 | 148 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 14... | 100 | .16 | 1940 | .12 | .050 | .40 | .020 | .010 | .010 |
| DEC 18... | 120 | .17 | 1380 | .17 | .070 | .40 | .010 | <.010 | .010 |
| MAR , 1986 12... | 140 | .19 | 931 | .23 | .040 | .30 | .020 | .010 | <.010 |
| APR 23... | 92 | .15 | 1940 | .12 | .020 | .40 | .010 | .010 | <.010 |
| JUN 24... | 150 | .21 | 674 | <.10 | .010 | .40 | .030 | .010 | <.010 |
| AUG 06... | 140 | .20 | 1100 | <.10 | .040 | .50 | .030 | <.010 | <.010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 04067500 MENOMINEE RIVER NEAR MC ALLISTER, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 1210 | 5950 | -- | 30 | <1 | 10 | <.5 | 3 | 2 | <3 | 1 |
| MAR , 1986<br>12... | 1120 | -- | 2500 | 20 | <1 | 15 | <1.0 | <1 | <1 | <3 | 2 |
| AUG<br>06... | 1310 | 2760 | -- | 10 | 1 | 16 | <.5 | 4 | <1 | <3 | 2 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 200 | 4 | 5 | 13 | <.1 | <10 | <1 | <1 | 30 | <6 | <3 |
| MAR , 1986<br>12... | 190 | 12 | <4 | 32 | <.1 | <10 | <1 | <1 | 44 | <6 | 7 |
| AUG<br>06... | 26 | 36 | 5 | 10 | <.1 | <10 | <1 | <1 | 48 | <6 | 6 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>03... | 1230 | 8330 | -- | 188 | 11.0 | -- | -- | -- |
| NOV<br>14... | 1210 | 5950 | -- | 181 | 2.0 | 3 | 48 | 78 |
| DEC<br>18... | 1030 | -- | 4000 | 249 | .0 | 7 | 76 | 39 |
| MAR , 1986<br>12... | 1120 | -- | 2500 | 286 | .0 | 3 | 20 | 76 |
| APR<br>23... | 1215 | 6420 | -- | 165 | 9.0 | 6 | 104 | 69 |
| JUN<br>24... | 1340 | 1590 | -- | 268 | 21.0 | 4 | 17 | 77 |
| AUG<br>06... | 1310 | 2760 | -- | 257 | 23.5 | -- | -- | -- |
| SEP<br>17... | 1555 | 3040 | -- | 258 | 14.0 | -- | -- | -- |

## 452241088224800 McCASLIN LAKE NEAR LAKEWOOD, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 45°22'41", long 88°22'48", in SW 1/4 sec.33, T.34 N., R.17 E., Marinette County, Hydrologic Unit 04030105, 8.8 mi northeast of Lakewood.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Norman Kratz. Elevation of gage is 1190 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.74, Sept. 28, 1985; minimum observed, 10.77, Aug. 3, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.73 ft, Apr. 28; minimum observed, 10.87 ft, Sept. 7.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 5 | 11.68 | OCT. 26 | 11.54 | MAY 12 | 11.49 | JUNE 11 | 11.39 | JULY 20 | 11.19 | AUG. 17 | 10.97 |
| OCT. 12 | 11.64 | APR. 28 | 11.73 | MAY 28 | 11.47 | JUNE 17 | 11.39 | JULY 27 | 11.09 | AUG. 30 | 10.91 |
| OCT. 18 | 11.57 | MAY 4 | 11.61 | JUNE 3 | 11.43 | JULY 6 | 11.27 | AUG. 2 | 11.01 | SEPT. 7 | 10.87 |
| | | | | | | | | | | SEPT. 27 | 11.28 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 45°22'51", long 88°22'40", in SW 1/4 sec.33, T.34 N., R.17 E., Marinette County, Hydrologic Unit 04030105, near center of lake, and 9.0 mi northeast of Lakewood.

PERIOD OF RECORD.--May 1985 to current year.

REMARKS.--Secchi disc readings made by Norman Kratz.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 6 | 1.2 | OCT. 26 | 1.9 | MAY 12 | 2.3 | JUNE 11 | 1.7 | JULY 20 | 1.5 | AUG. 17 | 1.2 |
| OCT. 12 | 1.5 | APR. 28 | 2.6 | MAY 28 | 2.3 | JUNE 17 | 1.5 | JULY 27 | 1.2 | AUG. 30 | 1.4 |
| OCT. 18 | 1.7 | MAY 4 | 2.3 | JUNE 3 | 1.8 | JULY 6 | 1.4 | AUG. 2 | 1.2 | SEPT. 7 | 1.4 |
| | | | | | | | | | | SEPT. 27 | 1.7 |

## 04069500 PESHTIGO RIVER AT PESHTIGO, WI

LOCATION.--Lat 45°02'49", long 87°44'40", in NE 1/4 sec.30, T.30 N., R.23 E., Marinette County, Hydrologic Unit 04030105, on left bank 75 ft downstream from Chicago and Northwestern Railway bridge, 0.5 mi downstream from Wisconsin Public Service Corp. Powerplant at Peshtigo, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--1,080 mi$^2$.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WDR WI-80-1: Drainage area. WDR WI-84-1: 1983 average discharge.

GAGE.--Water-stage recorder. Datum of gage is 584.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for periods of ice listed in rating table below. Records good except those for ice-affected periods, which are fair. Diurnal fluctuation caused by two powerplants upstream.

AVERAGE DISCHARGE.--33 years, 950 ft$^3$/s, 11.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,790 ft$^3$/s May 9, 1960, gage height, 11.59 ft, from rating curve extended above 5,000 ft$^3$/s on basis of computation of peak flow through dam gates; minimum, 17 ft$^3$/s Nov. 29, 1966, gage height, 1.00 ft; minimum daily, 84 ft$^3$/s Aug. 5, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,030 ft$^3$/s Apr. 8, gage height, 8.85 ft; maximum gage height, 9.07 ft Mar. 29 (backwater from ice); minimum daily, 331 ft$^3$/s July 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 27 and Nov. 29 to Mar. 29.)

| | | | |
|---|---|---|---|
| 1.7 | 320 | 5.0 | 2,180 |
| 2.0 | 450 | 7.0 | 3,580 |
| 3.0 | 970 | 9.0 | 5,200 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1880 | 1440 | 1100 | 800 | 700 | 980 | 4320 | 1320 | 414 | 743 | 1080 | 464 |
| 2 | 1950 | 3150 | 1200 | 740 | 680 | 980 | 4700 | 1260 | 352 | 597 | 995 | 454 |
| 3 | 2000 | 4240 | 1100 | 780 | 680 | 960 | 4270 | 1080 | 419 | 569 | 915 | 485 |
| 4 | 2210 | 4500 | 1000 | 820 | 680 | 900 | 3800 | 1050 | 407 | 384 | 744 | 511 |
| 5 | 2670 | 4750 | 1000 | 820 | 680 | 840 | 3950 | 1000 | 470 | 477 | 621 | 532 |
| 6 | 3230 | 4050 | 1000 | 800 | 680 | 840 | 4340 | 993 | 420 | 524 | 630 | 449 |
| 7 | 3320 | 3370 | 1000 | 760 | 760 | 820 | 4780 | 945 | 417 | 331 | 610 | 463 |
| 8 | 3280 | 2890 | 1100 | 780 | 720 | 820 | 4930 | 879 | 341 | 500 | 698 | 473 |
| 9 | 3130 | 2600 | 1000 | 800 | 700 | 800 | 4800 | 769 | 377 | 425 | 734 | 486 |
| 10 | 2630 | 2340 | 960 | 740 | 700 | 860 | 4570 | 657 | 437 | 422 | 646 | 565 |
| 11 | 2150 | 1950 | 940 | 700 | 680 | 880 | 3860 | 641 | 445 | 371 | 776 | 687 |
| 12 | 1780 | 1770 | 920 | 700 | 720 | 860 | 3290 | 693 | 546 | 525 | 791 | 1030 |
| 13 | 1730 | 1730 | 900 | 740 | 660 | 880 | 2850 | 743 | 587 | 512 | 682 | 1010 |
| 14 | 1760 | 1700 | 980 | 760 | 660 | 880 | 2540 | 827 | 591 | 534 | 579 | 980 |
| 15 | 1550 | 1640 | 920 | 800 | 680 | 880 | 2360 | 728 | 525 | 538 | 587 | 902 |
| 16 | 1370 | 1590 | 940 | 820 | 660 | 840 | 2020 | 743 | 469 | 614 | 606 | 1220 |
| 17 | 1290 | 1770 | 1000 | 800 | 640 | 920 | 2320 | 836 | 399 | 748 | 597 | 1080 |
| 18 | 1310 | 1850 | 960 | 720 | 660 | 1000 | 2280 | 1040 | 411 | 656 | 699 | 1110 |
| 19 | 1210 | 2050 | 1000 | 700 | 720 | 1200 | 2170 | 875 | 430 | 1010 | 604 | 1060 |
| 20 | 1050 | 2270 | 940 | 760 | 720 | 1400 | 1940 | 885 | 600 | 1020 | 572 | 1110 |
| 21 | 940 | 2220 | 940 | 740 | 700 | 1300 | 1710 | 773 | 514 | 799 | 537 | 1090 |
| 22 | 924 | 2220 | 900 | 760 | 680 | 1300 | 1640 | 703 | 424 | 999 | 522 | 1070 |
| 23 | 875 | 1970 | 860 | 720 | 680 | 1400 | 1410 | 598 | 421 | 829 | 503 | 1280 |
| 24 | 1060 | 1330 | 880 | 700 | 720 | 1600 | 1340 | 586 | 467 | 641 | 509 | 1400 |
| 25 | 1290 | 1190 | 920 | 700 | 700 | 1500 | 1360 | 557 | 478 | 678 | 509 | 1470 |
| 26 | 1200 | 1060 | 660 | 700 | 720 | 2200 | 1380 | 504 | 526 | 549 | 496 | 1630 |
| 27 | 1270 | 1100 | 880 | 720 | 780 | 2900 | 1380 | 482 | 847 | 464 | 530 | 1750 |
| 28 | 1210 | 1080 | 900 | 740 | 900 | 3400 | 1360 | 607 | 1100 | 534 | 513 | 1950 |
| 29 | 1160 | 1100 | 880 | 700 | --- | 4700 | 1260 | 556 | 956 | 579 | 480 | 2030 |
| 30 | 1150 | 1000 | 860 | 700 | --- | 4420 | 1200 | 457 | 897 | 883 | 434 | 2100 |
| 31 | 986 | --- | 880 | 680 | --- | 4200 | --- | 537 | --- | 961 | 475 | --- |
| TOTAL | 53565 | 65920 | 29720 | 23200 | 19660 | 47460 | 84130 | 24326 | 15687 | 19416 | 19674 | 30841 |
| MEAN | 1728 | 2197 | 959 | 748 | 702 | 1531 | 2804 | 785 | 523 | 626 | 635 | 1028 |
| MAX | 3320 | 4750 | 1200 | 820 | 900 | 4700 | 4930 | 1320 | 1100 | 1020 | 1080 | 2100 |
| MIN | 875 | 1000 | 860 | 680 | 640 | 800 | 1200 | 457 | 341 | 331 | 434 | 449 |
| CFSM | 1.60 | 2.03 | .89 | .69 | .65 | 1.42 | 2.60 | .73 | .48 | .58 | .59 | .95 |
| IN. | 1.85 | 2.27 | 1.02 | .80 | .68 | 1.63 | 2.90 | .84 | .54 | .67 | .68 | 1.06 |

CAL YR 1985 TOTAL 445853 MEAN 1222 MAX 4750 MIN 245 CFSM 1.13 IN 15.36
WTR YR 1986 TOTAL 433599 MEAN 1188 MAX 4930 MIN 331 CFSM 1.10 IN 14.94

## 04070000 WHEELER LAKE NEAR LAKEWOOD, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 45°19'07", long 88°28'58", in NW 1/4 sec.27, T.33 N., R.16 E., Oconto County, Hydrologic Unit 04030104, on south shore of lake, 2.5 mi northeast of Lakewood.

DRAINAGE AREA.--2.27 mi$^2$, approximately. Area of Wheeler Lake, 380 acres.

PERIOD OF RECORD.--August 1936 to September 1981. April to September 1986.

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevations above this datum. Staff gage read by Warren Thomas on south side of lake. Prior to Apr. 19, 1936, nonrecording gage was located on east shore of lake. Apr. 20, 1939, to Apr. 13, 1960, nonrecording gage was located on southwest shore of lake.

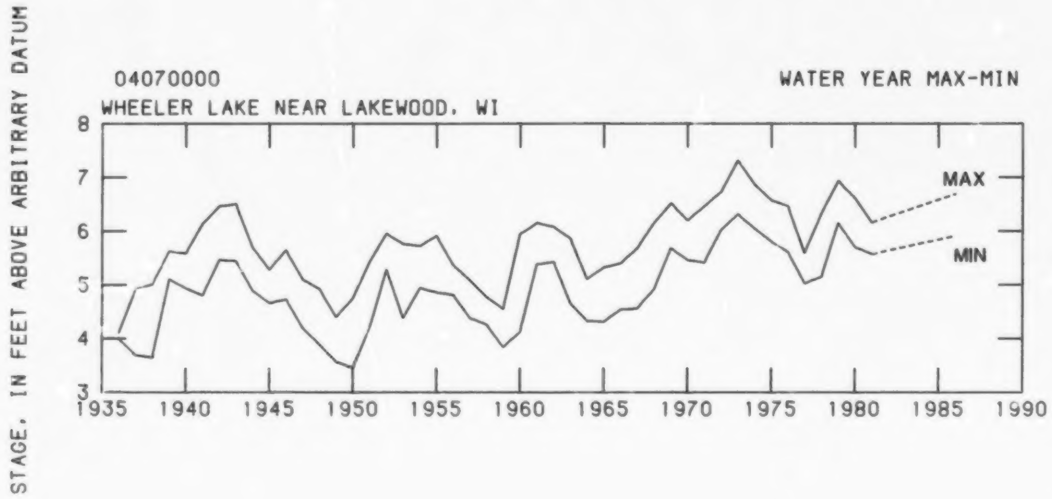
REMARKS.--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.31 ft June 6, 1973; minimum observed, 3.45 ft Feb. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.69 ft, Apr. 16; minimum observed, 5.91 ft, Sept. 6.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 16 | 6.69 | MAY 17 | 6.51 | JUNE 13 | 6.25 | JULY 9 | 6.15 | JULY 31 | 6.21 | AUG. 30 | 5.94 |
| APR. 27 | 6.67 | MAY 21 | 6.39 | JUNE 17 | 6.23 | JULY 14 | 6.15 | AUG. 6 | 6.17 | SEPT. 6 | 5.91 |
| MAY 4 | 6.57 | MAY 24 | 6.45 | JUNE 26 | 6.19 | JULY 20 | 6.35 | AUG. 16 | 6.11 | SEPT. 13 | 5.97 |
| MAY 10 | 6.58 | MAY 31 | 6.33 | JULY 4 | 6.17 | JULY 25 | 6.25 | AUG. 23 | 6.07 | SEPT. 20 | 6.01 |
| | | | | | | | | | | SEPT. 24 | 6.09 |



### WATER-QUALITY RECORDS

LOCATION.--Lat 45°19'07", long 88°28'32", in NE 1/4 sec.27, T.33 N., R.16 E., Oconto County, Hydrologic Unit 04030104, near center of lake, and 2.6 mi northeast of Lakewood.

PERIOD OF RECORD.--July 1985 to current year.

REMARKS.--Secchi disc readings made by Roy A. Green.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 3 | 5.2 | MAY 20 | 5.8 | JUNE 1 | 7.3 | JUNE 26 | 5.0 | JULY 25 | 4.4 | AUG. 30 | 3.8 |
| MAY 9 | 5.0 | MAY 23 | 6.1 | JUNE 4 | 6.4 | JULY 4 | 5.0 | JULY 31 | 4.3 | SEPT. 6 | 3.7 |
| MAY 12 | 5.2 | MAY 25 | 6.7 | JUNE 8 | 5.8 | JULY 9 | 5.0 | AUG. 6 | 4.0 | SEPT. 13 | 4.3 |
| MAY 14 | 5.2 | MAY 29 | 7.6 | JUNE 13 | 5.3 | JULY 14 | 5.0 | AUG. 16 | 4.0 | SEPT. 20 | 4.1 |
| MAY 17 | 5.2 | MAY 31 | 7.3 | JUNE 17 | 5.3 | JULY 20 | 4.7 | AUG. 23 | 4.0 | SEPT. 24 | 4.1 |

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## 04071000 OCONTO RIVER NEAR GILLETT, WI

LOCATION.--Lat 44°51'53", long 88°18'00", in NW 1/4 sec.34, T.28 N., R.18 E., Oconto County, Hydrologic Unit 04030104, on left bank 300 ft upstream from County Trunk Highway BB bridge, 2.0 mi upstream from Christy Brook, 2.0 mi south of Gillett, and at mile 29.

DRAINAGE AREA.--705 mi$^2$.

PERIOD OF RECORD.--June 1906 to March 1909, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1207: 1922. WSP 1307: 1907-8(M), 1914-16(M), 1918-21(M), 1923-33(M), 1937-38(M), 1943(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 732.87 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation). See WSP 1727 for history of changes prior to Aug. 25, 1938.

REMARKS.--Estimated daily discharges: July 13-17 and ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--75 years (water years 1907-08, 1914-86), 587 ft$^3$/s, 11.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft$^3$/s Apr. 10, 1922, gage height, 11.2 ft from floodmarks, caused by a failure of dam at Pulcifer 4 mi above station; minimum, 93 ft$^3$/s Nov. 26, 1941, gage height, 0.13 ft flow retarded by anchor ice above station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 8 | 0400 | 1,870 | 3.67 | Mar. 28 | 1700 | ice jam | *9.23 |
| Nov. 4 | 2200 | 2,850 | 4.96 | Mar. 29 | ---- | A *3,000 | ice jam |

A Estimated, daily mean discharge.

Minimum discharge, 312 ft$^3$/s Sept. 3, 9, gage height, 0.94 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 22 to Mar. 29.)

| | | | |
|---|---|---|---|
| 0.9 | 300 | 3.0 | 1,400 |
| 1.4 | 480 | 4.0 | 2,100 |
| 2.0 | 780 | 5.0 | 2,880 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 905 | 1040 | 760 | 660 | 540 | 520 | 2700 | 837 | 412 | 473 | 454 | 321 |
| 2 | 998 | 1630 | 680 | 660 | 540 | 520 | 2720 | 804 | 403 | 426 | 460 | 316 |
| 3 | 1100 | 2180 | 600 | 660 | 540 | 520 | 2710 | 787 | 394 | 385 | 448 | 313 |
| 4 | 1250 | 2750 | 720 | 660 | 540 | 520 | 2640 | 751 | 392 | 354 | 445 | 339 |
| 5 | 1440 | 2770 | 760 | 660 | 560 | 520 | 2580 | 720 | 398 | 364 | 415 | 348 |
| 6 | 1560 | 2440 | 820 | 660 | 560 | 520 | 2600 | 696 | 390 | 381 | 473 | 345 |
| 7 | 1800 | 2070 | 860 | 640 | 560 | 520 | 2630 | 668 | 381 | 370 | 408 | 343 |
| 8 | 1860 | 1790 | 880 | 640 | 560 | 520 | 2580 | 633 | 374 | 355 | 401 | 326 |
| 9 | 1770 | 1600 | 920 | 640 | 560 | 520 | 2440 | 577 | 368 | 344 | 394 | 315 |
| 10 | 1590 | 1460 | 940 | 640 | 560 | 520 | 2220 | 555 | 361 | 335 | 398 | 366 |
| 11 | 1420 | 1330 | 940 | 620 | 540 | 520 | 1970 | 544 | 373 | 338 | 418 | 544 |
| 12 | 1300 | 1240 | 900 | 600 | 540 | 520 | 1730 | 541 | 408 | 361 | 436 | 593 |
| 13 | 1210 | 1180 | 840 | 600 | 540 | 540 | 1540 | 547 | 456 | 390 | 409 | 629 |
| 14 | 1140 | 1130 | 800 | 620 | 540 | 540 | 1430 | 561 | 465 | 420 | 386 | 533 |
| 15 | 1090 | 1080 | 740 | 620 | 520 | 560 | 1450 | 561 | 439 | 490 | 405 | 543 |
| 16 | 1040 | 1120 | 740 | 620 | 520 | 560 | 1460 | 567 | 414 | 580 | 466 | 583 |
| 17 | 987 | 1130 | 740 | 620 | 520 | 560 | 1500 | 593 | 390 | 632 | 453 | 598 |
| 18 | 925 | 1150 | 740 | 620 | 520 | 800 | 1480 | 654 | 368 | 609 | 425 | 573 |
| 19 | 873 | 1190 | 760 | 600 | 520 | 960 | 1390 | 660 | 376 | 613 | 410 | 553 |
| 20 | 817 | 1240 | 760 | 600 | 520 | 1000 | 1280 | 639 | 411 | 673 | 392 | 563 |
| 21 | 770 | 1330 | 740 | 620 | 520 | 1000 | 1190 | 594 | 430 | 718 | 379 | 583 |
| 22 | 741 | 1300 | 720 | 620 | 540 | 1100 | 1120 | 551 | 407 | 677 | 366 | 624 |
| 23 | 726 | 1200 | 700 | 620 | 540 | 1200 | 1050 | 524 | 389 | 614 | 358 | 629 |
| 24 | 775 | 1000 | 700 | 600 | 540 | 1300 | 976 | 510 | 377 | 568 | 357 | 653 |
| 25 | 833 | 900 | 700 | 600 | 540 | 1400 | 920 | 496 | 370 | 537 | 353 | 734 |
| 26 | 872 | 840 | 700 | 600 | 540 | 2000 | 888 | 492 | 375 | 511 | 349 | 821 |
| 27 | 879 | 820 | 700 | 580 | 520 | 2200 | 853 | 494 | 428 | 503 | 348 | 929 |
| 28 | 827 | 820 | 680 | 560 | 520 | 2700 | 862 | 483 | 496 | 472 | 345 | 1000 |
| 29 | 768 | 800 | 680 | 560 | --- | 3000 | 863 | 468 | 569 | 451 | 338 | 1090 |
| 30 | 724 | 780 | 680 | 540 | --- | 2580 | 869 | 455 | 546 | 426 | 330 | 1140 |
| 31 | 696 | --- | 660 | 540 | --- | 2650 | --- | 422 | --- | 423 | 326 | --- |
| TOTAL | 33686 | 41310 | 23560 | 19080 | 15060 | 32890 | 50641 | 18384 | 12360 | 14793 | 12345 | 17247 |
| MEAN | 1087 | 1377 | 760 | 615 | 538 | 1061 | 1688 | 593 | 412 | 477 | 398 | 575 |
| MAX | 1860 | 2770 | 940 | 660 | 560 | 3000 | 2720 | 837 | 569 | 718 | 473 | 1140 |
| MIN | 696 | 780 | 600 | 540 | 520 | 520 | 853 | 422 | 361 | 335 | 326 | 313 |
| CFSM | 1.54 | 1.95 | 1.08 | .87 | .76 | 1.51 | 2.39 | .84 | .58 | .68 | .57 | .82 |
| IN. | 1.78 | 2.18 | 1.24 | 1.01 | .79 | 1.74 | 2.67 | .97 | .65 | .78 | .65 | .91 |

CAL YR 1985 TOTAL 282683 MEAN 774 MAX 2770 MIN 296 CFSM 1.10 IN 14.92
WTR YR 1986 TOTAL 291356 MEAN 798 MAX 3000 MIN 313 CFSM 1.13 IN 15.37

## 04071858 PENSAUKEE RIVER NEAR PENSAUKEE, WI

LOCATION.--Lat 44°49'08", long 87°57'12", in NW 1/4 NE 1/4 sec.16, T.27 N., R.21 E., Oconto County, Hydrologic Unit 04030103, on right bank 300 ft downstream from bridge on town road, 2.8 mi downstream from Brookside Creek, 2.6 mi west of Pensaukee, 3.5 mi upstream from mouth.

DRAINAGE AREA.--134 $mi^2$.

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 583.69 ft above National Geodetic Vertical Datum of 1929 (Wisconsin Department of Transportation bench mark).

REMARKS.--Estimated daily discharge: July 15-30, and the ice period listed in rating table below. Records good except for ice-affected period, which is fair; July 15-30 (estimated daily discharge) and Sept. 5-10, (period of beaver activity), which are poor.

AVERAGE DISCHARGE.--14 years, 100 $ft^3/s$, 10.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,310 $ft^3/s$ May 31, 1979, gage height, 13.58 ft; minimum daily discharge, 1.0 $ft^3/s$ Aug. 31, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 0600 | 1,350 | 8.25 | July 17 | unknown | 2,220 | 10.23 |
| Mar. 26 | 1300 | *3,470 | *12.36 | | | | |

Minimum discharge, 6.2 $ft^3/s$ July 10, 11, gage height, 2.25 ft, but may have been less during period of beaver activity, Sept. 6-9.

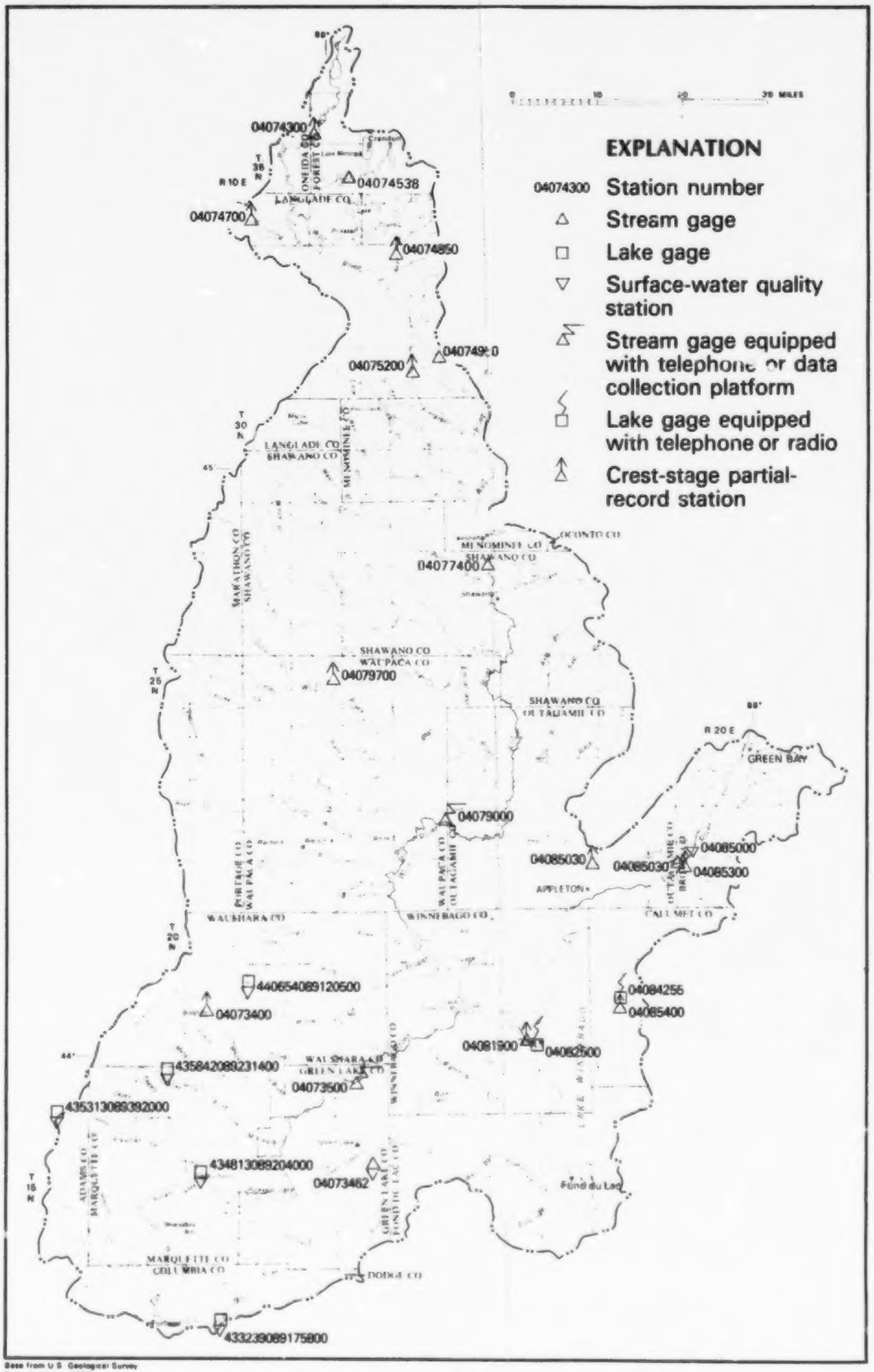
RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Sept. 15; stage-discharge relation affected by ice Nov. 22 to Mar. 24.)

| | | | |
|---|---|---|---|
| 2.2 | 3.5 | 5.0 | 390 |
| 2.3 | 9.0 | 6.0 | 610 |
| 2.5 | 29 | 7.0 | 910 |
| 3.0 | 84 | 9.0 | 1,650 |
| 4.0 | 210 | 12.0 | 3,250 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 191 | 297 | 84 | 54 | 43 | 41 | 443 | 59 | 13 | 20 | 21 | 21 |
| 2 | 146 | 1200 | 82 | 54 | 44 | 41 | 341 | 53 | 13 | 19 | 21 | 20 |
| 3 | 115 | 1010 | 80 | 54 | 45 | 41 | 262 | 47 | 11 | 17 | 20 | 17 |
| 4 | 186 | 891 | 78 | 54 | 45 | 41 | 248 | 42 | 12 | 16 | 21 | 16 |
| 5 | 520 | 559 | 76 | 52 | 46 | 42 | 304 | 44 | 11 | 16 | 18 | 14 |
| 6 | 542 | 381 | 74 | 50 | 46 | 42 | 504 | 38 | 10 | 14 | 14 | 12 |
| 7 | 348 | 308 | 74 | 48 | 46 | 43 | 427 | 34 | 11 | 17 | 12 | 12 |
| 8 | 235 | 255 | 74 | 48 | 46 | 44 | 288 | 29 | 13 | 15 | 13 | 12 |
| 9 | 173 | 208 | 74 | 49 | 45 | 45 | 212 | 27 | 9.1 | 12 | 13 | 16 |
| 10 | 138 | 193 | 72 | 50 | 45 | 52 | 169 | 27 | 8.5 | 7.1 | 14 | 41 |
| 11 | 116 | 166 | 72 | 50 | 44 | 62 | 141 | 27 | 10 | 6.7 | 14 | 87 |
| 12 | 115 | 166 | 70 | 50 | 44 | 70 | 120 | 27 | 35 | 9.2 | 15 | 134 |
| 13 | 141 | 202 | 66 | 49 | 44 | 74 | 105 | 27 | 47 | 76 | 12 | 116 |
| 14 | 139 | 222 | 64 | 49 | 44 | 80 | 101 | 25 | 34 | 103 | 10 | 77 |
| 15 | 110 | 205 | 62 | 48 | 43 | 88 | 292 | 26 | 25 | 76 | 12 | 74 |
| 16 | 87 | 272 | 62 | 47 | 44 | 100 | 509 | 38 | 21 | 350 | 11 | 125 |
| 17 | 72 | 552 | 60 | 47 | 44 | 110 | 400 | 49 | 22 | 1800 | 10 | 114 |
| 18 | 62 | 525 | 58 | 47 | 45 | 160 | 249 | 97 | 19 | 1500 | 11 | 93 |
| 19 | 60 | 490 | 58 | 48 | 45 | 340 | 179 | 100 | 25 | 1300 | 9.0 | 80 |
| 20 | 56 | 434 | 58 | 49 | 45 | 500 | 142 | 70 | 51 | 350 | 10 | 91 |
| 21 | 54 | 258 | 58 | 49 | 45 | 700 | 121 | 50 | 38 | 200 | 8.5 | 109 |
| 22 | 53 | 180 | 58 | 49 | 44 | 1100 | 99 | 39 | 26 | 160 | 11 | 221 |
| 23 | 50 | 140 | 60 | 48 | 43 | 1400 | 84 | 33 | 21 | 120 | 12 | 310 |
| 24 | 64 | 120 | 60 | 47 | 42 | 1800 | 72 | 32 | 17 | 600 | 18 | 254 |
| 25 | 91 | 110 | 58 | 46 | 42 | 2380 | 65 | 29 | 15 | 700 | 28 | 232 |
| 26 | 86 | 100 | 58 | 45 | 41 | 3170 | 78 | 28 | 13 | 300 | 29 | 467 |
| 27 | 69 | 98 | 56 | 45 | 41 | 2500 | 79 | 24 | 28 | 120 | 38 | 675 |
| 28 | 60 | 94 | 56 | 44 | 41 | 1520 | 70 | 21 | 45 | 80 | 31 | 448 |
| 29 | 53 | 90 | 56 | 44 | --- | 1100 | 61 | 21 | 28 | 54 | 27 | 274 |
| 30 | 52 | 86 | 56 | 43 | --- | 863 | 57 | 20 | 19 | 37 | 24 | 210 |
| 31 | 49 | --- | 54 | 43 | --- | 601 | --- | 16 | --- | 26 | 22 | --- |
| TOTAL | 4233 | 9812 | 2028 | 1500 | 1232 | 19150 | 6222 | 1199 | 650.6 | 8121.0 | 529.5 | 4372 |
| MEAN | 137 | 327 | 65.4 | 48.4 | 44.0 | 618 | 207 | 38.7 | 21.7 | 262 | 17.1 | 146 |
| MAX | 542 | 1200 | 84 | 54 | 46 | 3170 | 509 | 100 | 51 | 1800 | 38 | 675 |
| MIN | 49 | 86 | 54 | 43 | 41 | 41 | 57 | 16 | 8.5 | 6.7 | 8.5 | 12 |
| CFSM | 1.02 | 2.44 | .49 | .36 | .33 | 4.61 | 1.55 | .29 | .16 | 1.96 | .13 | 1.09 |
| IN. | 1.18 | 2.72 | .56 | .42 | .34 | 5.32 | 1.73 | .33 | .18 | 2.25 | .15 | 1.21 |

CAL YR 1985 TOTAL 39052.8 MEAN 107 MAX 1200 MIN 4.5 CFSM .80 IN 10.84
WTR YR 1986 TOTAL 59049.1 MEAN 162 MAX 3170 MIN 6.7 CFSM 1.21 IN 16.39



Base from U.S. Geological Survey
State base map, 1968

FOX-WOLF RIVER BASIN

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## 433239089175800 PARK LAKE AT PARDEEVILLE, WI

LOCATION.--Lat 43°32'39", long 89°17'58", in NE 1/4 NE 1/4 sec.35, T.13 N., R.10 E., Columbia County, Hydrologic Unit 04030201, at Pardeeville.

DRAINAGE AREA.--48.4 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--February 27 to September 30, 1986.

GAGE.--Staff gage at outlet read by Gene Buzzell. Datum of gage, 807.00 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.44 ft, Sept. 25; minimum observed, 6.94 ft, Mar. 6.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | --- | --- | 7.82 | --- | --- | 7.92 | --- | --- |
| 2 | | | | | --- | --- | --- | --- | --- | --- | 7.82 | 7.86 |
| 3 | | | | | --- | --- | --- | 7.66 | --- | 7.90 | 7.78 | --- |
| 4 | | | | | --- | --- | 7.74 | 7.70 | 7.63 | --- | --- | 7.92 |
| 5 | | | | | --- | --- | --- | --- | --- | 7.92 | 7.68 | --- |
| 6 | | | | | --- | 6.94 | 7.78 | 7.72 | --- | --- | --- | 7.88 |
| 7 | | | | | --- | --- | --- | --- | --- | 7.48 | 7.64 | --- |
| 8 | | | | | --- | 6.96 | 7.80 | 7.72 | --- | --- | 7.58 | 7.82 |
| 9 | | | | | --- | 7.00 | --- | --- | --- | 7.28 | --- | --- |
| 10 | | | | | --- | --- | 7.82 | --- | --- | --- | 7.80 | 7.76 |
| 11 | | | | | --- | 7.12 | --- | --- | --- | 7.18 | --- | --- |
| 12 | | | | | --- | --- | 7.82 | --- | 7.57 | --- | --- | 7.80 |
| 13 | | | | | --- | 7.20 | 7.84 | --- | --- | 7.92 | 7.72 | --- |
| 14 | | | | | --- | --- | --- | 7.70 | --- | --- | --- | 7.86 |
| 15 | | | | | --- | 7.48 | 7.86 | --- | --- | 8.10 | --- | --- |
| 16 | | | | | --- | 7.52 | --- | 7.72 | --- | --- | 7.56 | 7.92 |
| 17 | | | | | --- | --- | --- | --- | 7.91 | 8.02 | --- | --- |
| 18 | | | | | --- | 7.76 | 7.90 | 7.76 | 7.81 | --- | 7.76 | 8.06 |
| 19 | | | | | --- | --- | --- | 7.82 | --- | 7.80 | --- | --- |
| 20 | | | | | --- | 7.98 | 7.90 | --- | --- | 7.78 | --- | 8.02 |
| 21 | | | | | --- | --- | --- | 7.80 | --- | --- | 7.72 | 8.12 |
| 22 | | | | | --- | 7.96 | 7.88 | --- | --- | 7.64 | 7.62 | 8.22 |
| 23 | | | | | --- | 7.96 | 7.70 | 7.82 | --- | --- | 7.76 | 8.26 |
| 24 | | | | | --- | --- | 7.84 | --- | --- | 7.72 | --- | 8.32 |
| 25 | | | | | --- | 7.92 | --- | 7.82 | 7.76 | --- | 7.90 | 8.44 |
| 26 | | | | | --- | --- | 7.82 | --- | --- | 7.78 | 7.82 | 8.22 |
| 27 | | | | | 7.00 | 7.90 | --- | 7.76 | --- | 7.84 | --- | 7.96 |
| 28 | | | | | --- | --- | 7.76 | --- | --- | --- | 7.62 | 8.02 |
| 29 | | | | | --- | 7.86 | --- | 7.76 | --- | 7.94 | --- | --- |
| 30 | | | | | --- | 7.82 | 7.72 | --- | --- | --- | 7.76 | 8.04 |
| 31 | | | | | --- | --- | --- | 7.72 | --- | 7.86 | --- | --- |

433239089175800 PARK LAKE AT PARDEEVILLE, WI--CONTINUED

## WATER-QUALITY RECORDS

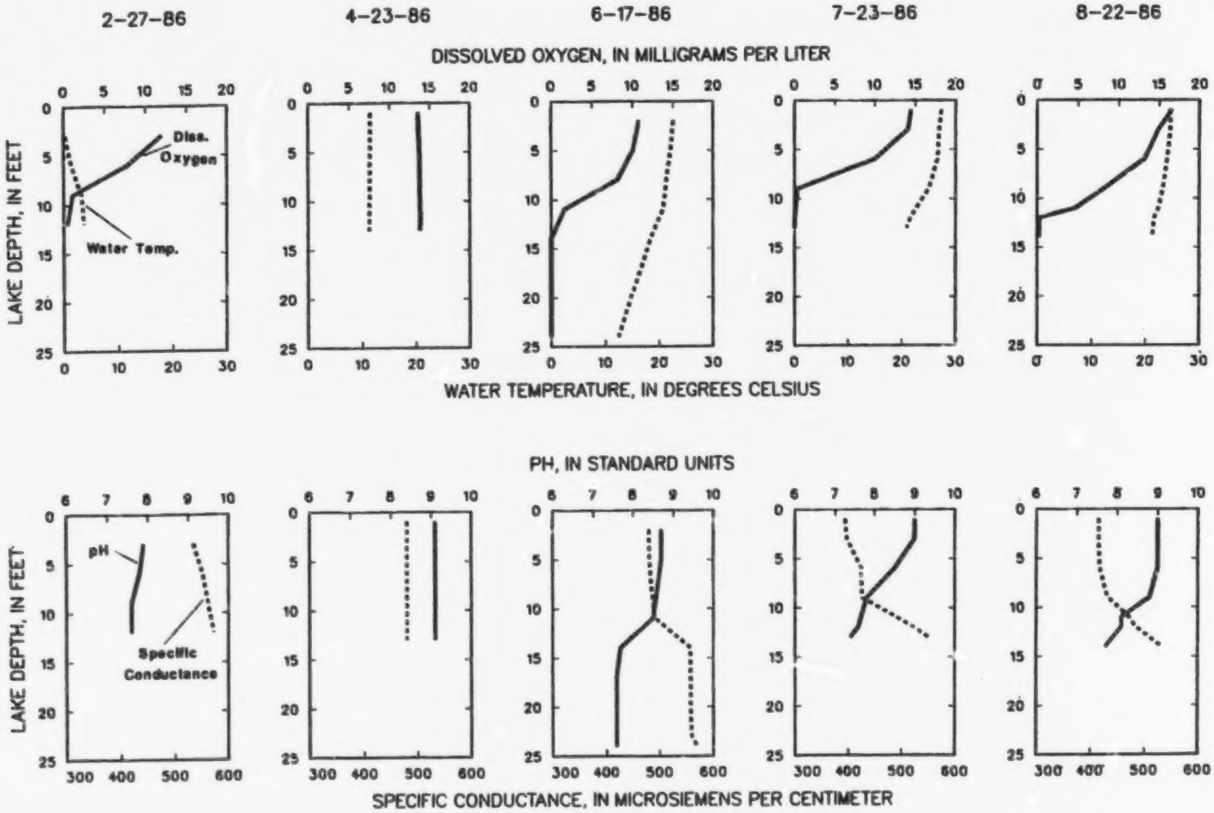
PERIOD OF RECORD.--February 27 to August 22, 1986.

REMARKS.--Lake sampled near center at a depth of 13 ft.

WATER-QUALITY DATA, FEBRUARY 27 TO AUGUST 22, 1986
(Milligrams per liter unless otherwise indicated)

| | Feb. 27 | | Apr. 23 | | June 17 | | July 23 | | Aug. 22 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 12.0 | 3.0 | 12.5 | 2.0 | 24.0 | 3.0 | 12.5 | 3.0 | 13.5 |
| Specific conductance (uS) | 535 | 573 | 480 | 480 | 480 | 570 | 399 | 523 | 416 | 532 |
| pH | 7.9 | 7.6 | 9.1 | 9.1 | 8.7 | 7.6 | 9.0 | 7.6 | 9.0 | 7.7 |
| Water temperature (°C) | 0.5 | 3.5 | 11.5 | 11.5 | 22.5 | 12.5 | 27.0 | 21.5 | 24.5 | 21.0 |
| Color (Pt-Co. scale) | -- | -- | 30 | 30 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 6.0 | 2.5 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- -- | -- | -- 1.0 -- | | -- 0.7 -- | | -- 0.5 -- | | -- 0.4 -- | |
| Dissolved oxygen | 12.0 | 0.4 | 13.7 | 13.9 | 10.8 | 0.0 | 14.1 | 0.0 | 14.9 | 0.2 |
| Hardness, as CaCO$_3$ | -- | -- | 250 | 260 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 52 | 52 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 30 | 32 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 4.0 | 4.2 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 2.2 | 2.2 | -- | -- | -- | -- | -- | -- |
| Alkalinity as CaCO$_3$ | -- | -- | 223 | 225 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved (SO$_4$) | -- | -- | 20 | 19 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 12 | 12 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved (SiO$_2$) | -- | -- | 1.1 | 1.2 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180°C | -- | -- | 258 | 285 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .88 | .88 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | .02 | .02 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .02 | .02 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .98 | .88 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.9 | 1.8 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .044 | .038 | .046 | .071 | .040 | .045 | .087 | .062 |
| Phosphorus, ortho, diss (as P) | -- | -- | .004 | .004 | -- | .049 | -- | .009 | -- | -- |
| Iron, dissolved (Fe) ug/L | -- | -- | 13 | 10 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 1 | 2 | -- | -- | -- | -- | -- | -- |
| Chlorophyll *a*, phyto. (ug/L) | -- | -- | 26[1/] | -- | -- | -- | -- | -- | -- | -- |

[1/] Adjusted from 17 ug/L by Wisconsin State Laboratory of Hygiene.



**BEST COPY AVAILABLE**

## 435313089392000 PATRICK LAKE NEAR GRAND MARSH, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°53'13", long 89°39'20", in NW 1/4 sec.10, T.16 N., R.7 E., Adams County, Hydrologic Unit 04030201, 2.5 mi east of Grand Marsh.

*PERIOD OF RECORD*.--October 1984 to current year.

GAGE.--Staff gage read by Orval Vierck. Elevation of gage is 973 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 13.90 ft, Sept. 20, 1986; minimum observed, 11.47 ft, Oct. 4, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 13.90 ft, Sept. 20; minimum observed, 12.29 ft, Oct. 29.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 3 | 12.34 | NOV. 4 | 12.48 | JAN. 15 | 12.65 | APR. 15 | 12.95 | JUNE 18 | 12.75 | JULY 30 | 13.08 |
| OCT. 9 | 12.34 | NOV. 8 | 12.45 | JAN. 24 | 12.65 | MAY 10 | 12.67 | JUNE 25 | 12.74 | AUG. 6 | 12.96 |
| OCT. 13 | 12.34 | NOV. 13 | 12.50 | MAR. 4 | 12.75 | MAY 23 | 12.75 | JULY 2 | 12.96 | AUG. 15 | 12.91 |
| OCT. 16 | 12.33 | NOV. 18 | 12.57 | MAR. 14 | 12.80 | MAY 30 | 12.73 | JULY 9 | 12.89 | AUG. 20 | 12.87 |
| OCT. 24 | 12.34 | NOV. 25 | 12.54 | MAR. 22 | 12.97 | JUNE 4 | 12.63 | JULY 16 | 12.99 | AUG. 28 | 12.34 |
| OCT. 29 | 12.29 | NOV. 30 | 12.54 | MAR. 30 | 12.95 | JUNE 11 | 12.79 | JULY 23 | 12.93 | SEPT. 10 | 13.07 |
| | | | | | | | | | | SEPT. 20 | 13.90 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°53'09", long 89°39'33", in NE 1/4 sec.9, T.16 N., R.7 E., Adams County, Hydrologic Unit 04030201, near center of lake, and 2.3 mi east of Grand Marsh.

PERIOD OF RECORD.--July 1985 to current year.

REMARKS.--Secchi disc readings made by Orval Vierck.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 30 | 2.8 | JUNE 18 | 4.7 | JULY 9 | 4.3 | JULY 30 | 2.9 | AUG. 20 | 3.8 | SEPT. 10 | 3.7 |
| JUNE 4 | 5.0 | JUNE 25 | 4.8 | JULY 16 | 3.4 | AUG. 6 | 2.5 | AUG. 28 | 3.2 | SEPT. 20 | 3.0 |
| JUNE 11 | 4.6 | JULY 2 | 2.6 | JULY 23 | 3.0 | AUG. 15 | 3.5 | | | | |

## 434813089204000 MONTELLO LAKE AT MONTELLO, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°48'13", long 89°20'40", in SW 1/4 sec.5, T.15 N., R.10 E., Marquette County, Hydrologic Unit 04030201, at Montello.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Harry Clark. Elevation of gage is 783 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.94 ft, July 26, 1985; minimum observed, 10.24 ft, Aug. 23, 24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.89 ft, July 27; minimum observed, 10.79 ft, June 9.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | --- | 11.25 | 11.65 | 11.51 | |
| 2 | | | | | | | | --- | 11.05 | 11.21 | 11.51 | |
| 3 | | | | | | | | --- | 11.25 | 11.49 | 11.61 | |
| 4 | | | | | | | | --- | 11.35 | 11.43 | 11.39 | |
| 5 | | | | | | | | --- | --- | 11.21 | 11.31 | |
| 6 | | | | | | | | --- | --- | 11.11 | 11.45 | |
| 7 | | | | | | | | --- | --- | 11.31 | 11.37 | |
| 8 | | | | | | | | --- | --- | --- | 11.31 | |
| 9 | | | | | | | | --- | 10.79 | 11.37 | 11.31 | |
| 10 | | | | | | | | --- | 11.41 | 11.31 | 11.19 | |
| 11 | | | | | | | | --- | 11.53 | --- | 11.29 | |
| 12 | | | | | | | | 11.15 | --- | 11.31 | 11.35 | |
| 13 | | | | | | | | 11.36 | 11.49 | 11.27 | 11.41 | |
| 14 | | | | | | | | 11.47 | 11.59 | 11.25 | 11.79 | |
| 15 | | | | | | | | 11.59 | --- | 11.49 | 11.11 | |
| 16 | | | | | | | | 11.63 | 11.49 | 11.61 | 11.21 | |
| 17 | | | | | | | | --- | 11.29 | 11.85 | --- | |
| 18 | | | | | | | | --- | 11.51 | 11.57 | --- | |
| 19 | | | | | | | | 11.63 | 11.51 | 11.51 | --- | |
| 20 | | | | | | | | 11.73 | 11.37 | 11.51 | --- | |
| 21 | | | | | | | | 11.75 | 11.39 | 11.31 | 11.43 | |
| 22 | | | | | | | | 11.51 | 11.33 | 11.29 | 11.33 | |
| 23 | | | | | | | | 11.51 | 11.09 | 11.45 | 11.25 | |
| 24 | | | | | | | | --- | 11.21 | 11.31 | 11.19 | |
| 25 | | | | | | | | --- | 11.49 | 11.61 | 11.15 | |
| 26 | | | | | | | | --- | 11.57 | 11.71 | --- | |
| 27 | | | | | | | | 11.41 | 11.47 | 11.89 | 11.45 | |
| 28 | | | | | | | | 11.51 | 11.51 | 11.61 | 11.19 | |
| 29 | | | | | | | | --- | 11.49 | 11.67 | 11.27 | |
| 30 | | | | | | | | 11.55 | 11.49 | 11.71 | --- | |
| 31 | | | | | | | | 11.53 | --- | 11.31 | --- | |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°48'01", long 89°20'29", in NW 1/4 sec.8, T.15 N., R.10 E., Marquette County, Hydrologic Unit 04030201, near center of lake, at Montello.

PERIOD OF RECORD.--May 1985 to current year.

REMARKS.--Secchi disc readings made by Harry Clark.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 12 | 2.3 | JUNE 1 | 2.1 | JUNE 22 | 2.3 | JULY 6 | 1.8 | JULY 22 | 2.4 | AUG. 5 | 3.0 |
| MAY 13 | 2.1 | JUNE 2 | 2.3 | JUNE 23 | 2.1 | JULY 7 | 2.0 | JULY 23 | 2.1 | AUG. 6 | 2.6 |
| MAY 14 | 1.8 | JUNE 4 | 2.4 | JUNE 24 | 2.1 | JULY 9 | 2.3 | JULY 24 | 2.3 | AUG. 7 | 3.0 |
| MAY 15 | 2.3 | JUNE 9 | 2.4 | JUNE 25 | 2.4 | JULY 10 | 1.8 | JULY 25 | 2.4 | AUG. 8 | 3.0 |
| MAY 16 | 2.1 | JUNE 10 | 2.7 | JUNE 26 | 2.7 | JULY 12 | 2.1 | JULY 26 | 2.4 | AUG. 9 | 3.0 |
| MAY 19 | 1.8 | JUNE 11 | 2.3 | JUNE 27 | 2.3 | JULY 13 | 1.8 | JULY 27 | 2.1 | AUG. 10 | 2.4 |
| MAY 20 | 1.8 | JUNE 13 | 1.5 | JUNE 28 | 1.8 | JULY 14 | 2.7 | JULY 28 | 2.4 | AUG. 11 | 3.2 |
| MAY 21 | 2.0 | JUNE 14 | 1.8 | JUNE 29 | 2.0 | JULY 15 | 2.1 | JULY 29 | 2.3 | AUG. 12 | 3.7 |
| MAY 22 | 1.8 | JUNE 16 | 2.4 | JUNE 30 | 1.8 | JULY 16 | 2.1 | JULY 30 | 2.1 | AUG. 13 | 2.9 |
| MAY 23 | 2.0 | JUNE 17 | 2.7 | JULY 1 | 1.7 | JULY 17 | 2.1 | JULY 31 | 2.1 | AUG. 15 | 3.0 |
| MAY 27 | 2.4 | JUNE 18 | 2.4 | JULY 2 | 2.1 | JULY 18 | 1.8 | AUG. 1 | 2.4 | AUG. 16 | 3.2 |
| MAY 28 | 2.3 | JUNE 19 | 2.1 | JULY 3 | 2.1 | JULY 19 | 1.8 | AUG. 2 | 2.7 | AUG. 22 | 3.0 |
| MAY 30 | 2.1 | JUNE 20 | 2.6 | JULY 4 | 1.8 | JULY 20 | 2.0 | AUG. 3 | 2.9 | AUG. 24 | 3.0 |
| MAY 31 | 2.4 | JUNE 21 | 1.8 | JULY 5 | 1.8 | JULY 21 | 1.8 | AUG. 4 | 2.8 | AUG. 27 | 3.2 |
| | | | | | | | | | | AUG. 28 | 3.4 |

## 435842089231400 SHARON LAKE NEAR DAKOTA, WI

### LAKE-STAGE RECORD

LOCATION.--Lat 43°58'42", long 89°23'14", in NE 1/4 sec.2, T.17 N., R.9 E., Marquette County, Hydrologic Unit 04030201, 1.7 mi southwest of Dakota.

PERIOD OF RECORD.--November 1984 to current year.

GAGE.--Staff gage read by Mike Jacobi. Elevation of gage is 845 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 9.11 ft, Sept. 29, 30, 1986; minimum observed, 7.84 ft, Sept. 3, 4, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.11 ft, Sept. 29, 30; minimum observed, 7.90 ft, Oct. 1-31.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.90 | 8.04 | | | | | | | --- | 8.59 | 8.55 | 8.17 |
| 2 | 7.90 | 8.10 | | | | | | | --- | 8.57 | 8.55 | 8.15 |
| 3 | 7.90 | 8.10 | | | | | | | --- | 8.55 | 8.53 | 8.13 |
| 4 | 7.90 | 8.10 | | | | | | | --- | 8.55 | 8.51 | 8.13 |
| 5 | 7.90 | 8.10 | | | | | | | --- | 8.53 | 8.49 | 8.11 |
| 6 | 7.90 | 8.10 | | | | | | | 8.43 | 8.53 | 8.47 | 8.09 |
| 7 | 7.90 | 8.10 | | | | | | | 8.43 | 8.51 | 8.47 | 8.07 |
| 8 | 7.90 | 8.10 | | | | | | | 8.43 | 8.49 | 8.49 | 8.05 |
| 9 | 7.90 | 8.14 | | | | | | | 8.43 | 8.45 | 8.47 | 8.03 |
| 10 | 7.90 | 8.18 | | | | | | | 8.41 | 8.43 | 8.04 | 8.11 |
| 11 | 7.90 | 8.18 | | | | | | | 8.51 | 8.43 | 8.43 | 8.39 |
| 12 | 7.90 | 8.18 | | | | | | | 8.59 | 8.61 | 8.41 | 8.37 |
| 13 | 7.90 | 8.18 | | | | | | | 8.57 | 8.59 | 8.39 | 8.35 |
| 14 | 7.90 | 8.18 | | | | | | | --- | 8.57 | 8.39 | 8.33 |
| 15 | 7.90 | 8.18 | | | | | | | --- | 8.59 | 8.41 | 8.37 |
| 16 | 7.90 | 8.18 | | | | | | | 8.54 | 8.59 | 8.41 | 8.37 |
| 17 | 7.90 | 8.24 | | | | | | | 8.53 | 8.57 | 8.39 | 8.35 |
| 18 | 7.90 | 8.24 | | | | | | | 8.51 | 8.57 | 8.37 | 8.37 |
| 19 | 7.90 | 8.30 | | | | | | | 8.49 | 8.55 | 8.35 | 8.37 |
| 20 | 7.90 | 8.30 | | | | | | | 8.49 | 8.53 | 8.33 | 8.43 |
| 21 | 7.90 | 8.30 | | | | | | | 8.49 | 8.51 | 8.31 | 8.53 |
| 22 | 7.90 | --- | | | | | | | 8.49 | 8.49 | 8.29 | 8.83 |
| 23 | 7.90 | --- | | | | | | | 8.47 | 8.49 | 8.25 | 8.85 |
| 24 | 7.90 | --- | | | | | | | 8.45 | 8.47 | 8.23 | 8.97 |
| 25 | 7.90 | --- | | | | | | | 7.43 | 8.61 | 8.21 | 8.99 |
| 26 | 7.90 | --- | | | | | | | 8.41 | 8.59 | 8.24 | 9.09 |
| 27 | 7.90 | --- | | | | | | | 8.61 | 8.61 | 8.25 | 9.09 |
| 28 | 7.90 | --- | | | | | | | --- | 8.59 | 8.52 | 9.09 |
| 29 | 7.90 | --- | | | | | | | --- | 8.57 | 8.56 | 9.11 |
| 30 | 7.90 | --- | | | | | | | --- | 8.55 | 8.52 | 9.11 |
| 31 | 7.90 | --- | | | | | | | --- | 8.53 | 8.19 | --- |
| MEAN | 7.90 | --- | | | | | | | --- | 8.54 | 8.39 | 8.48 |
| MAX | 7.90 | --- | | | | | | | --- | 8.61 | 8.56 | 9.11 |
| MIN | 7.90 | --- | | | | | | | --- | 8.43 | 8.04 | 8.03 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 93°58'36", long 89°23'01", in NE 1/4 sec.1, T.17 N., R.9 E., Marquette County, Hydrologic Unit 04030201, near center of lake, and 1.6 mi southwest of Dakota.

PERIOD OF RECORD.--June 8 to June 28, 1986.

REMARKS.--Secchi disc readings made by Mike Jacobi.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|
| JUNE 8 | 5.8 | JUNE 15 | 3.7 | JUNE 19 | 4.6 | JUNE 28 | 3.1 |

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI

LOCATION.--Lat 43°48'58", long 88°55'42" in SE 1/4 SE 1/4 NW 1/4 sec.34, T.16 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, at culvert on Spring Grove Road at Forest Glen Beach, 2.6 mi southeast of Green Lake.

DRAINAGE AREA.--3.05 $mi^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 800 ft, from topographic map.

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 781 $ft^3/s$ Sept. 10, 1986, gage height, 10.14 ft; minimum daily, 0.52 $ft^3/s$ Oct. 4, 30, 31, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 781 $ft^3/s$ Sept. 10, gage height, 10.14 ft; minimum daily, 1.3 $ft^3/s$ Mar. 3-9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Oct. 8-19; stage-discharge relation affected by ice Dec. 26, Jan. 26, 27, Feb. 10, 11, 13, 28, and Mar. 5-8.)

| | | | |
|---|---|---|---|
| 4.0 | 0.65 | 4.5 | 9.7 |
| 4.1 | 1.3 | 4.6 | 13 |
| 4.2 | 2.6 | 4.8 | 22 |
| 4.3 | 4.2 | 5.0 | 56 |
| 4.4 | 6.6 | 5.3 | 96 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.2 | 7.8 | 12 | 4.2 | 2.4 | 1.5 | 20 | 7.5 | 2.9 | 5.6 | 5.6 | 2.8 |
| 2 | 3.2 | 9.4 | 12 | 4.1 | 2.3 | 1.4 | 19 | 7.4 | 2.8 | 5.2 | 6.8 | 2.8 |
| 3 | 3.2 | 10 | 12 | 4.0 | 2.2 | 1.3 | 22 | 7.0 | 2.8 | 4.6 | 5.5 | 2.7 |
| 4 | 3.4 | 11 | 11 | 4.0 | 2.4 | 1.3 | 19 | 6.7 | 2.8 | 4.2 | 5.3 | 2.6 |
| 5 | 3.9 | 11 | 11 | 3.9 | 2.5 | 1.3 | 18 | 6.6 | 2.8 | 4.1 | 4.6 | 2.6 |
| 6 | 3.9 | 11 | 10 | 3.8 | 2.3 | 1.3 | 16 | 6.5 | 2.8 | 3.8 | 4.1 | 2.6 |
| 7 | 3.9 | 11 | 10 | 3.6 | 2.3 | 1.3 | 16 | 6.1 | 2.7 | 3.7 | 3.9 | 2.6 |
| 8 | 3.7 | 10 | 9.8 | 3.6 | 2.2 | 1.3 | 15 | 5.9 | 2.6 | 3.5 | 3.9 | 2.8 |
| 9 | 3.9 | 10 | 9.3 | 3.6 | 2.2 | 1.3 | 15 | 5.9 | 2.3 | 3.3 | 3.7 | 2.9 |
| 10 | 3.9 | 10 | 8.9 | 3.6 | 2.1 | 2.2 | 14 | 5.9 | 2.4 | 3.2 | 3.6 | 61 |
| 11 | 4.0 | 9.8 | 8.6 | 3.6 | 2.0 | 3.4 | 13 | 5.7 | 5.3 | 3.7 | 3.5 | 55 |
| 12 | 4.7 | 10 | 8.2 | 3.4 | 1.9 | 3.7 | 13 | 5.6 | 4.9 | 4.9 | 3.3 | 16 |
| 13 | 4.0 | 11 | 7.5 | 3.2 | 1.9 | 3.6 | 13 | 5.2 | 3.7 | 3.5 | 3.3 | 16 |
| 14 | 4.0 | 11 | 7.2 | 3.2 | 1.9 | 4.0 | 13 | 5.1 | 3.3 | 3.2 | 3.2 | 16 |
| 15 | 4.2 | 11 | 7.2 | 3.1 | 1.9 | 5.7 | 13 | 5.2 | 2.9 | 3.5 | 3.1 | 16 |
| 16 | 4.4 | 15 | 7.0 | 2.9 | 1.8 | 8.0 | 12 | 5.1 | 2.7 | 3.2 | 3.0 | 14 |
| 17 | 4.7 | 16 | 6.5 | 2.9 | 1.8 | 10 | 12 | 5.4 | 2.5 | 3.0 | 23 | 13 |
| 18 | 4.9 | 18 | 6.4 | 2.9 | 1.8 | 18 | 12 | 4.9 | 2.4 | 2.9 | 4.1 | 13 |
| 19 | 4.7 | 18 | 6.1 | 2.9 | 1.7 | 38 | 11 | 4.6 | 3.8 | 3.0 | 3.7 | 13 |
| 20 | 4.8 | 16 | 5.9 | 2.9 | 1.7 | 29 | 11 | 4.4 | 2.8 | 2.8 | 3.6 | 12 |
| 21 | 4.9 | 16 | 5.6 | 2.8 | 1.7 | 23 | 10 | 4.2 | 2.4 | 2.8 | 3.6 | 21 |
| 22 | 4.9 | 16 | 5.6 | 2.8 | 1.7 | 22 | 10 | 4.1 | 2.3 | 2.7 | 3.6 | 89 |
| 23 | 5.1 | 16 | 5.6 | 2.8 | 1.7 | 38 | 9.6 | 3.9 | 2.3 | 2.5 | 3.5 | 25 |
| 24 | 5.4 | 16 | 5.3 | 2.8 | 1.6 | 43 | 9.3 | 3.9 | 2.2 | 2.6 | 3.4 | 24 |
| 25 | 5.2 | 15 | 5.2 | 2.8 | 1.6 | 71 | 9.1 | 3.7 | 2.0 | 15 | 3.1 | 26 |
| 26 | 5.2 | 14 | 5.0 | 2.7 | 1.6 | 41 | 9.1 | 3.7 | 7.6 | 5.8 | 3.3 | 22 |
| 27 | 4.8 | 14 | 4.8 | 2.6 | 1.5 | 29 | 8.5 | 3.7 | 27 | 5.8 | 3.1 | 21 |
| 28 | 3.6 | 13 | 4.7 | 2.5 | 1.5 | 26 | 8.3 | 3.5 | 8.8 | 6.6 | 3.0 | 20 |
| 29 | 3.6 | 13 | 4.6 | 2.5 | --- | 23 | 7.9 | 3.4 | 7.6 | 5.2 | 2.9 | 20 |
| 30 | 3.7 | 12 | 4.4 | 2.5 | --- | 25 | 7.8 | 3.3 | 6.7 | 4.8 | 2.9 | 19 |
| 31 | 3.8 | --- | 4.2 | 2.4 | --- | 21 | --- | 3.0 | --- | 5.2 | 2.8 | --- |
| TOTAL | 130.8 | 382.0 | 231.6 | 98.6 | 54.2 | 499.6 | 386.6 | 157.1 | 130.1 | 133.9 | 136.0 | 556.4 |
| MEAN | 4.22 | 12.7 | 7.47 | 3.18 | 1.94 | 16.1 | 12.9 | 5.07 | 4.34 | 4.32 | 4.39 | 18.5 |
| MAX | 5.4 | 18 | 12 | 4.2 | 2.5 | 71 | 22 | 7.5 | 27 | 15 | 23 | 89 |
| MIN | 3.2 | 7.8 | 4.2 | 2.4 | 1.5 | 1.3 | 7.8 | 3.0 | 2.0 | 2.5 | 2.8 | 2.6 |
| CFSM | 1.38 | 4.16 | 2.45 | 1.04 | .64 | 5.28 | 4.23 | 1.66 | 1.42 | 1.42 | 1.44 | 6.07 |
| IN. | 1.59 | 4.66 | 2.82 | 1.20 | .66 | 6.09 | 4.71 | 1.92 | 1.59 | 1.63 | 1.66 | 6.78 |

CAL YR 1985 TOTAL 1987.45 MEAN 5.45 MAX 37 MIN .86 CFSM 1.79 IN 24.23
WTR YR 1986 TOTAL 2896.90 MEAN 7.94 MAX 89 MIN 1.3 CFSM 2.60 IN 35.32

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1981 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1981 to current year.
TOTAL AMMONIA-NITROGEN DISCHARGE: October 1981 to current year.
TOTAL-PHOSPHORUS DISCHARGE: October 1981 to current year.

INSTRUMENTATION.--Automatic pumping sampler since December 1981.

REMARKS.--Records good, except for Sept. 10-11, and 22 which are poor due to sampler malfunction. Daily loads estimated.

COOPERATION.--Observer furnished by the Green Lake Sanitary District.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,420 tons Apr. 3, 1982; minimum daily, 0 ton Sept. 11-18, 24-30, 1982.
TOTAL AMMONIA-NITROGREN DISCHARGE.--Maximum daily, 490 lb Apr. 3, 1982; minimum daily, 0.05 lb July 22-23, 1985.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,130 lb Sept. 10, 1986; minimum daily, 0.06 lb July 23, 1985.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,350 tons Sept. 10; minimum daily, 0.01 ton Sept. 1-8.
TOTAL AMMONIA-NITROGEN DISCHARGE: Maximum daily, 325 lb Sept. 10; minimum daily, 0.14 lb Mar. 5-8.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,130 lb Sept. 10; minimum daily, 0.14 lb Mar. 5-8.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 15... | 1320 | 4.2 | 730 | 10.0 |
| NOV | | | | |
| 13... | 1220 | 10 | 780 | 8.5 |
| JAN , 1986 | | | | |
| 09... | 1500 | 3.6 | 710 | 4.5 |
| FEB | | | | |
| 13... | 1335 | 1.8 | 580 | .5 |
| MAR | | | | |
| 21... | 1400 | 23 | 630 | 7.5 |
| 26... | 1405 | 39 | 480 | 9.5 |
| JUN | | | | |
| 06... | 1440 | 2.8 | 630 | 12.5 |
| AUG | | | | |
| 05... | 1025 | 4.9 | 620 | 11.5 |
| SEP | | | | |
| 10... | 1250 | 11 | 320 | 15.5 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| OCT , 1985 | | | | | |
| 04... | 1015 | 3.4 | -- | -- | 15 |
| 12... | 0410 | 4.7 | -- | -- | 91 |
| 12... | 0430 | 5.4 | -- | -- | 77 |
| 12... | 0450 | 6.4 | -- | -- | 87 |
| 12... | 0520 | 8.2 | -- | -- | 164 |
| 12... | 0610 | 7.5 | -- | -- | 174 |
| 12... | 0710 | 5.4 | -- | -- | 141 |
| 12... | 0840 | 4.7 | -- | -- | 180 |
| 15... | 0335 | 4.2 | -- | -- | 8 |
| 15... | 1335 | 4.4 | <.010 | .050 | -- |
| 21... | 1445 | 4.9 | -- | -- | 15 |
| 29... | 1110 | 3.6 | -- | -- | 15 |
| NOV | | | | | |
| 01... | 0245 | 7.5 | -- | -- | 149 |
| 01... | 0255 | 7.8 | .080 | .340 | -- |
| 01... | 0305 | 8.2 | -- | -- | 135 |
| 01... | 0315 | 8.2 | .090 | .340 | -- |
| 01... | 0325 | 8.5 | -- | -- | 151 |
| 01... | 0335 | 8.5 | .110 | .380 | -- |
| 01... | 0415 | 9.1 | -- | -- | 182 |
| 01... | 0425 | 9.1 | .120 | .420 | -- |
| 01... | 0455 | 8.5 | -- | -- | 166 |
| 01... | 0545 | 7.5 | .120 | .380 | -- |
| 01... | 0555 | 6.9 | -- | -- | 133 |
| 01... | 0930 | 6.1 | -- | -- | 21 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| NOV, 1985 | | | | | |
| 01... | 1525 | 7.8 | -- | -- | 71 |
| 01... | 1535 | 8.2 | .040 | .210 | -- |
| 01... | 1545 | 8.8 | -- | -- | 72 |
| 01... | 1725 | 9.7 | -- | -- | 179 |
| 01... | 2055 | 9.7 | .090 | .300 | -- |
| 01... | 2125 | 9.7 | -- | -- | 107 |
| 02... | 0325 | 9.1 | -- | -- | 93 |
| 02... | 0355 | 8.8 | .060 | .180 | -- |
| 02... | 1305 | 9.4 | .050 | .130 | -- |
| 02... | 1405 | 9.4 | -- | -- | 91 |
| 02... | 1605 | 9.7 | -- | -- | 121 |
| 02... | 1905 | 10 | .060 | .160 | -- |
| 02... | 2005 | 10 | -- | -- | 147 |
| 03... | 0105 | 10 | -- | -- | 147 |
| 03... | 0205 | 10 | .060 | .140 | -- |
| 04... | 1135 | 11 | -- | -- | 58 |
| 04... | 1305 | 11 | .040 | .080 | -- |
| 04... | 1605 | 11 | -- | -- | 61 |
| 04... | 2305 | 11 | -- | -- | 78 |
| 05... | 0705 | 11 | -- | -- | 69 |
| 05... | 0905 | 11 | .030 | .060 | -- |
| 12... | 1100 | 10 | -- | -- | 13 |
| 12... | 1115 | 10 | .020 | .070 | -- |
| 15... | 1435 | 11 | .030 | .040 | 20 |
| 16... | 0210 | 14 | -- | -- | 233 |
| 16... | 0240 | 16 | .030 | .520 | -- |

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| NOV , 1985 | | | | | |
| 16... | 0310 | 17 | -- | -- | 586 |
| 16... | 0340 | 20 | .040 | .670 | -- |
| 16... | 0410 | 21 | -- | -- | 749 |
| 16... | 0440 | 21 | .130 | .690 | -- |
| 16... | 0510 | 19 | -- | -- | 459 |
| 16... | 0640 | 16 | .090 | .330 | -- |
| 16... | 0710 | 15 | -- | -- | 169 |
| 16... | 1010 | 15 | -- | -- | 82 |
| 16... | 1040 | 15 | .040 | .130 | -- |
| 16... | 1210 | 16 | -- | -- | 89 |
| 16... | 1510 | 15 | -- | -- | 73 |
| 16... | 1540 | 15 | .050 | .150 | -- |
| 18... | 0950 | 17 | .030 | .120 | -- |
| 18... | 1040 | 19 | -- | -- | 241 |
| 18... | 1115 | 20 | -- | -- | 452 |
| 18... | 1145 | 19 | .040 | .370 | -- |
| 18... | 1245 | 20 | -- | -- | 228 |
| 18... | 1745 | 19 | -- | -- | 136 |
| 18... | 2345 | 18 | -- | -- | 143 |
| 19... | 0045 | 18 | .080 | .150 | -- |
| 19... | 1315 | 18 | -- | -- | 106 |
| 19... | 1515 | 18 | .010 | .100 | -- |
| 19... | 2315 | 17 | -- | -- | 87 |
| 20... | 1315 | 16 | -- | -- | 57 |
| 20... | 1855 | 16 | -- | -- | 64 |
| 21... | 0655 | 16 | .040 | .140 | -- |
| 21... | 1055 | 16 | -- | -- | 46 |
| 22... | 0655 | 16 | -- | -- | 51 |
| 22... | 1055 | 16 | .030 | .130 | -- |
| 26... | 1045 | 15 | -- | -- | 62 |
| DEC | | | | | |
| 06... | 1310 | 10 | -- | -- | 18 |
| 19... | 1335 | 6.1 | -- | -- | 8 |
| JAN , 1986 | | | | | |
| 03... | 1500 | 4.0 | -- | -- | 9 |
| 09... | 1500 | 3.6 | .040 | .030 | 28 |
| 15... | 1400 | 3.1 | -- | -- | 31 |
| 30... | 1500 | 2.5 | -- | -- | 34 |
| FEB | | | | | |
| 04... | 1515 | 2.5 | -- | -- | 16 |
| 13... | 1335 | 1.8 | .030 | .030 | 18 |
| 28... | 1300 | 1.5 | -- | -- | 48 |
| MAR | | | | | |
| 05... | 1350 | 1.5 | -- | -- | 7 |
| 10... | 1500 | 3.4 | -- | -- | 32 |
| 14... | 1330 | 4.0 | -- | -- | 36 |
| 15... | 1615 | 6.1 | .090 | .140 | -- |
| 15... | 1635 | 6.1 | -- | -- | 52 |
| 15... | 1955 | 6.6 | -- | -- | 76 |
| 15... | 2015 | 6.6 | .050 | .100 | -- |
| 16... | 0035 | 7.2 | -- | -- | 82 |
| 16... | 0055 | 7.2 | .040 | .090 | -- |
| 17... | 1425 | 11 | .030 | .090 | 68 |
| 18... | 0420 | 13 | .050 | .170 | -- |
| 18... | 0440 | 13 | -- | -- | 237 |
| 18... | 0820 | 15 | .050 | .220 | 263 |
| 18... | 1240 | 17 | -- | -- | 441 |
| 18... | 1300 | 17 | .100 | .220 | -- |
| 18... | 1440 | 19 | -- | -- | 536 |
| 18... | 1550 | 19 | -- | -- | 521 |
| 18... | 1650 | 19 | .070 | .350 | -- |
| 18... | 1750 | 20 | -- | -- | 465 |
| 18... | 2050 | 22 | .110 | .290 | -- |
| 18... | 2150 | 27 | -- | -- | 697 |
| 18... | 2350 | 49 | -- | -- | 1000 |
| 19... | 0050 | 54 | .150 | .330 | -- |
| 19... | 0150 | 53 | .150 | .330 | 642 |
| 19... | 0350 | 44 | -- | -- | 520 |
| 19... | 0450 | 37 | .130 | .320 | -- |
| 19... | 0840 | 36 | -- | -- | 456 |
| 19... | 0850 | 36 | .120 | .290 | -- |
| 19... | 1055 | 34 | -- | -- | 400 |
| 19... | 1450 | 41 | .120 | .270 | 407 |
| 19... | 1655 | 36 | -- | -- | 459 |
| 19... | 1855 | 32 | .140 | .150 | -- |
| 19... | 2055 | 32 | -- | -- | 271 |
| 20... | 0455 | 26 | -- | -- | 145 |
| 20... | 0655 | 27 | .060 | .110 | -- |
| 20... | 1420 | 36 | -- | -- | 127 |
| 20... | 1625 | 31 | -- | -- | 172 |
| 20... | 1825 | 29 | .040 | .110 | -- |
| MAR , 1986 | | | | | |
| 21... | 1025 | 24 | .010 | .070 | -- |
| 21... | 1225 | 24 | -- | -- | 88 |
| 21... | 1400 | 23 | .050 | .090 | 101 |
| 21... | 1745 | 20 | .030 | .080 | -- |
| 21... | 1946 | 20 | -- | -- | 113 |
| 22... | 0945 | 19 | .020 | .060 | -- |
| 22... | 1145 | 19 | -- | -- | 71 |
| 22... | 1345 | 21 | -- | -- | 94 |
| 22... | 1545 | 23 | -- | -- | 128 |
| 22... | 1745 | 27 | .050 | .090 | -- |
| 22... | 1945 | 26 | -- | -- | 148 |
| 23... | 0745 | 21 | -- | -- | 79 |
| 23... | 0945 | 21 | .060 | .080 | -- |
| 23... | 1145 | 27 | -- | -- | 136 |
| 23... | 1345 | 61 | .150 | .150 | -- |
| 23... | 1545 | 67 | -- | -- | 1550 |
| 23... | 1945 | 53 | -- | -- | 466 |
| 23... | 2145 | 44 | .140 | .150 | -- |
| 24... | 1010 | 36 | .060 | .100 | 101 |
| 24... | 1210 | 37 | -- | -- | 230 |
| 24... | 1410 | 47 | .080 | .100 | -- |
| 24... | 2010 | 58 | -- | -- | 260 |
| 24... | 2210 | 49 | .120 | .160 | -- |
| 25... | 0410 | 60 | -- | -- | 224 |
| 25... | 0610 | 63 | .110 | .160 | -- |
| 25... | 0810 | 65 | -- | -- | 363 |
| 25... | 1010 | 89 | .150 | .260 | -- |
| 25... | 1015 | 89 | .240 | .760 | 1900 |
| 25... | 1050 | 94 | -- | -- | 2310 |
| 25... | 1120 | 98 | .200 | .270 | -- |
| 25... | 1150 | 131 | -- | -- | 4410 |
| 25... | 1220 | 114 | .240 | .450 | -- |
| 25... | 1250 | 135 | -- | -- | 2870 |
| 25... | 1350 | 115 | -- | -- | 2670 |
| 25... | 1400 | 99 | .290 | .470 | 1660 |
| 25... | 1415 | 97 | .350 | .620 | 1500 |
| 25... | 1420 | 100 | .350 | .300 | -- |
| 25... | 1445 | 89 | .350 | .680 | 1180 |
| 25... | 1600 | 80 | .310 | .590 | -- |
| 25... | 1601 | 80 | .280 | .340 | 789 |
| 25... | 1645 | 69 | .260 | .420 | -- |
| 25... | 1648 | 76 | -- | -- | 651 |
| 25... | 1730 | 74 | .270 | .230 | -- |
| 25... | 1830 | 63 | -- | -- | 365 |
| 26... | 0030 | 53 | -- | -- | 193 |
| 26... | 0130 | 49 | .190 | .190 | -- |
| 26... | 0630 | 41 | -- | -- | 166 |
| 26... | 1130 | 39 | .140 | .150 | -- |
| 26... | 1230 | 37 | -- | -- | 186 |
| 26... | 1300 | 46 | -- | -- | 131 |
| 26... | 1320 | 42 | -- | -- | 165 |
| 26... | 1720 | 39 | -- | -- | 139 |
| 26... | 2220 | 36 | .120 | .120 | -- |
| 26... | 2320 | 32 | -- | -- | 83 |
| 27... | 0520 | 27 | -- | -- | 107 |
| 27... | 1120 | 31 | -- | -- | 87 |
| 27... | 1220 | 32 | .120 | .140 | -- |
| 27... | 2225 | 27 | .060 | .090 | -- |
| 28... | 0025 | 27 | -- | -- | 96 |
| 28... | 1225 | 26 | -- | -- | 63 |
| 28... | 1425 | 26 | .060 | .100 | -- |
| 29... | 0425 | 23 | -- | -- | 93 |
| 29... | 0625 | 22 | .070 | .090 | -- |
| 29... | 2225 | 24 | .100 | .110 | 121 |
| 31... | 1015 | 21 | .030 | .070 | 40 |
| 31... | 2015 | 20 | -- | -- | 93 |
| APR | | | | | |
| 01... | 0015 | 20 | .030 | .060 | -- |
| 01... | 0815 | 23 | -- | -- | 149 |
| 01... | 1615 | 19 | .030 | .070 | -- |
| 01... | 2015 | 19 | -- | -- | 45 |
| 02... | 0815 | 19 | .030 | .050 | -- |
| 02... | 1215 | 19 | -- | -- | 36 |
| 02... | 2220 | 19 | -- | -- | 117 |
| 03... | 0620 | 19 | .030 | .060 | -- |
| 03... | 1020 | 19 | -- | -- | 62 |
| 03... | 1420 | 29 | .030 | .160 | -- |
| 03... | 1530 | 37 | -- | -- | 265 |
| 03... | 1600 | 41 | .080 | .180 | -- |
| 03... | 1630 | 39 | -- | -- | 224 |
| 03... | 1830 | 26 | -- | -- | 126 |

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| APR , 1986 | | | | | |
| 03... | 1900 | 24 | .050 | .130 | -- |
| 03... | 2130 | 21 | -- | -- | 83 |
| 04... | 0130 | 20 | -- | -- | 81 |
| 04... | 0200 | 19 | .030 | .070 | -- |
| 04... | 1410 | 18 | -- | -- | 26 |
| 04... | 1745 | 17 | .020 | .060 | 31 |
| 05... | 0345 | 18 | -- | -- | 40 |
| 05... | 0445 | 18 | .030 | .060 | -- |
| 05... | 1745 | 17 | -- | -- | 24 |
| 05... | 1845 | 17 | .020 | .060 | -- |
| 05... | 2120 | 17 | -- | -- | 35 |
| 14... | 1440 | 15 | -- | -- | 141 |
| 14... | 1520 | 16 | .020 | .120 | -- |
| 14... | 1540 | 16 | -- | -- | 117 |
| 18... | 1120 | 12 | .040 | .040 | 31 |
| 22... | 1440 | 10 | -- | -- | 26 |
| MAY | | | | | |
| 05... | 0950 | 6.6 | -- | -- | 10 |
| 16... | 1025 | 5.2 | -- | -- | 16 |
| 19... | 1230 | 4.7 | -- | -- | 11 |
| JUN | | | | | |
| 06... | 1440 | 2.8 | .040 | .050 | 31 |
| 11... | 0840 | 2.3 | -- | -- | 19 |
| 11... | 1635 | 9.7 | -- | -- | 612 |
| 11... | 1655 | 11 | .480 | .800 | -- |
| 11... | 1715 | 12 | -- | -- | 744 |
| 11... | 1735 | 12 | .100 | .530 | -- |
| 11... | 1755 | 14 | -- | -- | 1230 |
| 11... | 1815 | 14 | .470 | 3.00 | -- |
| 11... | 1835 | 13 | -- | -- | 4920 |
| 11... | 1915 | 16 | -- | -- | 4520 |
| 11... | 1935 | 16 | .780 | 1.30 | -- |
| 11... | 2015 | 13 | -- | -- | 3680 |
| 11... | 2055 | 12 | .750 | 1.30 | -- |
| 11... | 2115 | 11 | -- | -- | 2660 |
| 11... | 2215 | 8.8 | .630 | .730 | -- |
| 11... | 2235 | 8.2 | -- | -- | 1920 |
| 18... | 1520 | 2.5 | -- | -- | 35 |
| 19... | 2105 | 9.4 | -- | -- | 1220 |
| 19... | 2125 | 37 | .500 | 3.10 | 6800 |
| 19... | 2145 | 20 | -- | -- | 10400 |
| 19... | 2205 | 15 | 1.10 | 2.80 | 8800 |
| 19... | 2225 | 12 | -- | -- | 5500 |
| 19... | 2325 | 9.1 | .480 | .800 | -- |
| 26... | 2035 | 13 | -- | -- | 1700 |
| 26... | 2055 | 92 | 1.60 | 3.40 | 22000 |
| 26... | 2230 | 39 | -- | -- | 12200 |
| 26... | 2250 | 49 | 1.00 | .780 | -- |
| 26... | 2310 | 41 | -- | -- | 7220 |
| 26... | 2350 | 21 | -- | -- | 5080 |
| 27... | 0050 | 16 | .970 | .680 | -- |
| 27... | 0110 | 16 | -- | -- | 5840 |
| 27... | 0150 | 97 | -- | -- | 5930 |
| 27... | 0210 | 107 | .640 | 7.50 | -- |
| 27... | 0310 | 115 | -- | -- | 5830 |
| 27... | 0330 | 115 | .510 | 1.40 | -- |
| 27... | 0350 | 109 | -- | -- | 5570 |
| 27... | 0450 | 79 | .310 | 1.20 | -- |
| 27... | 0510 | 69 | -- | -- | 4260 |
| 27... | 0630 | 27 | -- | -- | 3520 |
| 27... | 0650 | 23 | .280 | .180 | -- |
| 27... | 1035 | 13 | -- | -- | 1230 |
| 27... | 1155 | 12 | -- | -- | 1040 |
| 27... | 1215 | 12 | .080 | .660 | -- |
| 27... | 1515 | 11 | -- | -- | 587 |
| 27... | 1615 | 11 | .060 | .230 | -- |
| 27... | 1835 | 10 | -- | -- | 419 |
| 27... | 2145 | 9.7 | .080 | .330 | -- |
| 27... | 2315 | 9.4 | -- | -- | 281 |
| 28... | 0900 | 9.1 | -- | -- | 122 |
| JUL | | | | | |
| 09... | 0900 | 3.4 | -- | -- | 24 |
| 11... | 1605 | 13 | -- | -- | 1260 |
| 12... | 1625 | 16 | .100 | .540 | 953 |
| 12... | 1655 | 12 | -- | -- | 2210 |
| 12... | 1725 | 10 | .200 | .480 | -- |
| 12... | 1935 | 13 | -- | -- | 1140 |
| 12... | 2005 | 12 | .150 | .690 | -- |
| 12... | 2035 | 10 | -- | -- | 787 |
| 12... | 2355 | 5.2 | .100 | .300 | -- |
| 12... | 2400 | 5.2 | -- | -- | 255 |
| 23... | 1020 | 2.6 | -- | -- | 10 |
| JUL , 1986 | | | | | |
| 25... | 0145 | 12 | -- | -- | 1500 |
| 25... | 0205 | 8.8 | .140 | 2.30 | -- |
| 25... | 0330 | 17 | -- | -- | 1430 |
| 25... | 0350 | 65 | .480 | 1.50 | -- |
| 25... | 0410 | 46 | -- | -- | 5860 |
| 25... | 0510 | 14 | -- | -- | 2050 |
| 25... | 0610 | 9.7 | -- | -- | 1900 |
| 25... | 0630 | 9.1 | .140 | .690 | -- |
| 25... | 0800 | 27 | -- | -- | 885 |
| 25... | 0820 | 94 | .480 | .910 | -- |
| 25... | 0840 | 87 | -- | -- | 5430 |
| 25... | 0920 | 51 | -- | -- | 2220 |
| 25... | 0940 | 29 | .170 | .720 | -- |
| 25... | 1001 | 36 | -- | -- | 1840 |
| 25... | 1235 | 12 | .150 | .780 | -- |
| 25... | 1305 | 11 | -- | -- | 1340 |
| 25... | 1330 | 10 | -- | -- | 1280 |
| 26... | 1330 | 10 | .120 | .650 | -- |
| 27... | 2220 | 11 | -- | -- | 604 |
| 27... | 2240 | 20 | .270 | .380 | -- |
| 27... | 2300 | 15 | -- | -- | 3890 |
| 27... | 2400 | 12 | .130 | .760 | -- |
| 28... | 0020 | 12 | -- | -- | 1260 |
| 28... | 0140 | 10 | -- | -- | 780 |
| 28... | 0200 | 9.1 | .070 | .800 | -- |
| 30... | 1130 | 4.9 | -- | -- | 11 |
| 31... | 1305 | 13 | -- | -- | 634 |
| 31... | 1325 | 14 | .580 | .400 | -- |
| 31... | 1405 | 10 | -- | -- | 1740 |
| AUG | | | | | |
| 01... | 2045 | 15 | -- | -- | 760 |
| 01... | 2105 | 1.0 | .250 | .550 | -- |
| 01... | 2145 | 10 | .250 | .490 | 2440 |
| 01... | 2205 | 12 | -- | -- | 1870 |
| 01... | 2245 | 18 | -- | -- | 2590 |
| 01... | 2305 | 17 | .740 | 1.40 | -- |
| 02... | 0005 | 13 | -- | -- | 1340 |
| 02... | 0105 | 10 | .600 | .640 | -- |
| 02... | 0125 | 9.4 | -- | -- | 780 |
| 05... | 0925 | 4.9 | -- | -- | 5 |
| 05... | 1025 | 4.9 | .110 | .040 | -- |
| 12... | 1500 | 3.2 | -- | -- | 2 |
| 17... | 0740 | 14 | -- | -- | 1020 |
| 17... | 0800 | 85 | .310 | 1.00 | 6680 |
| 17... | 0820 | 98 | -- | -- | 4380 |
| 17... | 0840 | 119 | .280 | .900 | -- |
| 17... | 0900 | 155 | -- | -- | 3790 |
| 17... | 0920 | 179 | .190 | 1.20 | 2820 |
| 17... | 0940 | 171 | -- | -- | 2620 |
| 17... | 1020 | 106 | -- | -- | 1590 |
| 17... | 1040 | 84 | .140 | .830 | -- |
| 17... | 1100 | 61 | -- | -- | 1250 |
| 17... | 1200 | 22 | .130 | .850 | -- |
| 17... | 1220 | 19 | -- | -- | 797 |
| 17... | 1400 | 11 | .090 | .920 | -- |
| 17... | 1420 | 10 | -- | -- | 393 |
| 17... | 1900 | 4.9 | -- | -- | 42 |
| SEP | | | | | |
| 05... | 1005 | 2.6 | -- | -- | 1 |
| 10... | 0240 | 9.7 | -- | -- | 372 |
| 10... | 0300 | 10 | .160 | .350 | -- |
| 10... | 0320 | 13 | -- | -- | 830 |
| 10... | 0420 | 8.5 | 160 | .450 | -- |
| 10... | 0440 | 6.6 | -- | -- | 196 |
| 10... | 1130 | 6.1 | .120 | .260 | -- |
| 10... | 1151 | 11 | -- | -- | 515 |
| 10... | 1210 | 14 | .120 | .410 | -- |
| 10... | 1230 | 14 | -- | -- | 518 |
| 10... | 1248 | 12 | .160 | .560 | -- |
| 10... | 1250 | 11 | .160 | .640 | -- |
| 10... | 1341 | 8.5 | -- | -- | 300 |
| 10... | 1400 | 7.2 | .140 | .420 | -- |
| 11... | 0905 | 21 | .030 | .230 | 290 |
| 11... | 0935 | 20 | .050 | .320 | -- |
| 11... | 1005 | 20 | -- | -- | 306 |
| 11... | 1205 | 19 | -- | -- | 170 |
| 11... | 1535 | 17 | .030 | .120 | -- |
| 11... | 1605 | 17 | -- | -- | 132 |
| 11... | 1905 | 17 | -- | -- | 107 |
| 11... | 2205 | 16 | -- | -- | 125 |
| 11... | 2235 | 16 | .040 | .170 | -- |
| 15... | 1625 | 15 | .020 | .070 | 32 |

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| SEP , 1986 | | | | | |
| 19... | 1000 | 12 | -- | -- | 19 |
| 21... | 1210 | 13 | -- | -- | 220 |
| 21... | 1230 | 13 | .070 | .240 | -- |
| 21... | 1250 | 14 | -- | -- | 287 |
| 21... | 1330 | 70 | -- | -- | 116 |
| 21... | 1350 | 70 | .060 | .270 | -- |
| 21... | 1410 | 77 | -- | -- | 1120 |
| 21... | 1450 | 49 | -- | -- | 1770 |
| 21... | 1530 | 58 | -- | -- | 1540 |
| 21... | 1550 | 58 | .220 | .770 | -- |
| 21... | 1730 | 24 | -- | -- | 855 |
| 21... | 1750 | 23 | .130 | .450 | -- |
| 21... | 1950 | 16 | .080 | .310 | -- |
| 21... | 2005 | 16 | -- | -- | 141 |
| 22... | 0940 | 75 | .130 | .470 | 461 |
| 22... | 1000 | 72 | .120 | .390 | -- |
| 22... | 1020 | 70 | -- | -- | 471 |
| 22... | 1140 | 54 | -- | -- | 332 |
| 22... | 1200 | 53 | .090 | .350 | -- |
| 22... | 1300 | 46 | -- | -- | 237 |
| 22... | 1440 | 37 | .080 | .240 | -- |
| 22... | 1500 | 36 | -- | -- | 166 |
| 22... | 1605 | 34 | .050 | .210 | -- |
| 22... | 1635 | 31 | -- | -- | 117 |
| 22... | 2035 | 27 | -- | -- | 98 |
| 22... | 2105 | 27 | .040 | .170 | -- |
| 23... | 0005 | 27 | -- | -- | 70 |
| 23... | 0335 | 26 | -- | -- | 70 |
| 23... | 0405 | 26 | .040 | .150 | -- |
| 23... | 1500 | 26 | -- | -- | 50 |
| 24... | 2155 | 34 | -- | -- | 115 |
| 24... | 2255 | 36 | -- | -- | 79 |
| 25... | 0025 | 32 | -- | -- | 57 |
| 25... | 1500 | 26 | .040 | .120 | -- |

### NITROGEN, AMMONIA, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .52 | 3.3 | 2.00 | .86 | .43 | .19 | 3.30 | 1.60 | .62 | 1.20 | 7.10 | .92 |
| 2 | .52 | 2.9 | 2.00 | .84 | .41 | .18 | 3.10 | 1.60 | .60 | 1.10 | 9.50 | .91 |
| 3 | .52 | 3.0 | 2.00 | .83 | .39 | .16 | 4.90 | 1.50 | .60 | .93 | 4.00 | .85 |
| 4 | .55 | 2.4 | 1.90 | .84 | .42 | .15 | 2.50 | 1.50 | .60 | .83 | 3.50 | .80 |
| 5 | .63 | 1.8 | 1.90 | .82 | .43 | .14 | 2.30 | 1.40 | .61 | .79 | 2.70 | .78 |
| 6 | .42 | 1.7 | 1.80 | .81 | .39 | .14 | 1.70 | 1.40 | .59 | .71 | 2.30 | .76 |
| 7 | .42 | 1.6 | 1.80 | .77 | .39 | .14 | 1.50 | 1.30 | .56 | .67 | 2.00 | .75 |
| 8 | .40 | 1.4 | 1.80 | .77 | .37 | .14 | 1.30 | 1.30 | .49 | .62 | 1.90 | .78 |
| 9 | .42 | 1.3 | 1.70 | .78 | .37 | .15 | 1.20 | 1.30 | .42 | .57 | 1.70 | .83 |
| 10 | .42 | 1.2 | 1.60 | .77 | .34 | .51 | 1.00 | 1.30 | .42 | .53 | 1.50 | 325 |
| 11 | .22 | 1.1 | 1.60 | .77 | .32 | 1.00 | .89 | 1.20 | 12.00 | .63 | 1.40 | 98.00 |
| 12 | .25 | 1.1 | 1.50 | .71 | .31 | 1.20 | .82 | 1.20 | 3.60 | 2.60 | 1.20 | 3.10 |
| 13 | .22 | 1.3 | 1.40 | .67 | .31 | 1.40 | .74 | 1.10 | 1.80 | 1.90 | 1.10 | 2.60 |
| 14 | .22 | 1.6 | 1.30 | .66 | .30 | 1.70 | 1.20 | 1.10 | 1.50 | 1.60 | 1.00 | 2.20 |
| 15 | .23 | 1.6 | 1.30 | .64 | .29 | 2.40 | 1.60 | 1.10 | 1.20 | 1.60 | .93 | 1.70 |
| 16 | .25 | 4.8 | 1.30 | .60 | .28 | 1.60 | 1.80 | 1.10 | 1.00 | 1.40 | .84 | 1.30 |
| 17 | .28 | 3.3 | 1.20 | .59 | .27 | 1.90 | 2.20 | 1.10 | .85 | 1.20 | 22.00 | 1.20 |
| 18 | .30 | 4.4 | 1.20 | .58 | .27 | 8.20 | 2.50 | 1.10 | .75 | 1.10 | 2.00 | .97 |
| 19 | .30 | 2.6 | 1.20 | .58 | .25 | 26.00 | 2.40 | .98 | 6.90 | 1.10 | 1.70 | .87 |
| 20 | .32 | 1.9 | 1.10 | .57 | .25 | 8.30 | 2.40 | .94 | 2.10 | .99 | 1.60 | .72 |
| 21 | .34 | 3.1 | 1.10 | .55 | .25 | 2.90 | 2.20 | .91 | 1.10 | .92 | 1.60 | 14.00 |
| 22 | .36 | 2.7 | 1.10 | .54 | .24 | 4.10 | 2.20 | .88 | .84 | .84 | 1.60 | 196 |
| 23 | .39 | 2.6 | 1.10 | .54 | .23 | 23.00 | 2.10 | .84 | .70 | .74 | 1.50 | 5.40 |
| 24 | .43 | 2.6 | 1.10 | .54 | .22 | 21.00 | 2.00 | .84 | .55 | .75 | 1.40 | 5.30 |
| 25 | .43 | 2.5 | 1.00 | .53 | .21 | 82.00 | 2.00 | .80 | .42 | 21.00 | 1.20 | 5.70 |
| 26 | .45 | 2.4 | 1.10 | .44 | .21 | 33.00 | 2.00 | .80 | 28.00 | 3.60 | 1.30 | 4.50 |
| 27 | .43 | 2.3 | .95 | .42 | .19 | 16.00 | 1.90 | .80 | 57.00 | 3.90 | 1.20 | 4.00 |
| 28 | .34 | 2.2 | .94 | .47 | 16 | 8.60 | 1.80 | .76 | 3.30 | 2.60 | 1.10 | 3.70 |
| 29 | .35 | 2.1 | .92 | .46 | --- | 10.00 | 1.70 | .73 | 2.30 | 1.70 | 1.00 | 3.50 |
| 30 | .38 | 2.1 | .89 | .45 | --- | 8.90 | 1.70 | .72 | 1.60 | 1.50 | 1.00 | 3.10 |
| 31 | .46 | --- | .87 | .43 | --- | 3.60 | --- | .66 | --- | 3.50 | .97 | --- |
| TOTAL | 11.77 | 68.9 | 42.67 | 19.83 | 8.50 | 268.70 | 58.95 | 33.96 | 133.02 | 63.12 | 83.84 | 690.24 |
| MEAN | .38 | 2.3 | 1.40 | .64 | .30 | 8.70 | 2.00 | 1.10 | 4.40 | 2.00 | 2.70 | 23.00 |

WTR YR 1986 TOTAL 1483.50 MEAN 4.10

## 04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.21 | 12.00 | 6.37 | .87 | .39 | .19 | 7.01 | 1.72 | .76 | 5.73 | 14.00 | .96 |
| 2 | 1.04 | 8.07 | 6.06 | .82 | .37 | .18 | 5.52 | 1.70 | .74 | 4.65 | 8.46 | .95 |
| 3 | 1.04 | 6.71 | 5.78 | .78 | .36 | .16 | 12.00 | 1.61 | .75 | 3.59 | 2.15 | .89 |
| 4 | 1.10 | 4.88 | 5.39 | .76 | .39 | .15 | 6.51 | 1.57 | .75 | 2.88 | 1.52 | .83 |
| 5 | 1.26 | 3.67 | 5.19 | .72 | .40 | .14 | 5.73 | 1.55 | .76 | 2.47 | 1.02 | .80 |
| 6 | 1.26 | 3.65 | 4.69 | .68 | .37 | .14 | 5.02 | 1.54 | .74 | 2.02 | .83 | .77 |
| 7 | 1.26 | 3.70 | 4.44 | .62 | .37 | .14 | 4.43 | 1.44 | .74 | 1.70 | .75 | .76 |
| 8 | 1.20 | 3.52 | 4.23 | .60 | .36 | .14 | 3.91 | 1.40 | .69 | 1.42 | .70 | .79 |
| 9 | 1.26 | 3.65 | 3.90 | .59 | .35 | .15 | 3.52 | 1.40 | .62 | 1.18 | .63 | .90 |
| 10 | 1.26 | 3.62 | 3.62 | .58 | .34 | .53 | 3.07 | 1.41 | .65 | 1.00 | .58 | 1130 |
| 11 | 1.08 | 3.62 | 3.40 | .58 | .32 | 1.08 | 2.66 | 1.36 | 25.00 | 2.78 | .53 | 459 |
| 12 | 1.27 | 3.68 | 3.12 | .55 | .31 | 1.42 | 2.45 | 1.34 | 5.94 | 8.34 | .47 | 13.00 |
| 13 | 1.08 | 3.30 | 2.79 | .52 | .31 | 1.69 | 2.21 | 1.26 | 2.36 | 5.31 | .44 | 10.00 |
| 14 | 1.08 | 2.92 | 2.59 | .51 | .30 | 2.27 | 4.46 | 1.24 | 1.39 | 4.18 | .41 | 8.03 |
| 15 | 1.13 | 2.46 | 2.51 | .50 | .29 | 3.76 | 3.25 | 1.27 | .83 | 5.70 | .37 | 6.20 |
| 16 | 1.16 | 20.00 | 2.35 | .47 | .28 | 3.90 | 2.93 | 1.24 | .74 | 4.90 | .33 | 4.90 |
| 17 | 1.20 | 9.90 | 2.14 | .47 | .27 | 5.06 | 2.75 | 1.32 | .69 | 2.46 | 112 | 4.53 |
| 18 | 1.21 | 19.00 | 2.03 | .47 | .27 | 25.00 | 2.57 | 1.21 | .66 | 2.02 | 3.33 | 4.03 |
| 19 | 1.12 | 11.00 | 1.88 | .47 | .25 | 52.00 | 2.39 | 1.13 | 21.00 | 1.80 | 1.96 | 3.89 |
| 20 | 1.11 | 10.00 | 1.76 | .47 | .25 | 17.00 | 2.40 | 1.09 | 1.95 | 1.48 | 1.83 | 3.40 |
| 21 | 1.10 | 12.00 | 1.63 | .45 | .25 | 9.76 | 2.27 | 1.05 | 1.01 | 1.26 | 1.77 | 31.00 |
| 22 | 1.06 | 11.00 | 1.57 | .45 | .24 | 8.60 | 2.20 | 1.03 | .80 | 1.04 | 1.72 | 758 |
| 23 | 1.08 | 11.00 | 1.53 | .45 | .23 | 35.00 | 2.13 | .99 | .78 | .84 | 1.62 | 19.00 |
| 24 | 1.10 | 10.00 | 1.42 | .45 | .22 | 31.00 | 2.06 | .99 | .60 | .80 | 1.50 | 17.00 |
| 25 | 1.03 | 9.62 | 1.34 | .45 | .21 | 110 | 2.02 | .95 | .54 | 68.00 | 1.35 | 22.00 |
| 26 | 1.00 | 8.99 | 1.32 | .44 | .21 | 34.00 | 2.04 | .95 | 43.00 | 16.00 | 1.39 | 14.00 |
| 27 | .90 | 8.32 | 1.15 | .42 | .19 | 19.00 | 1.92 | .95 | 251 | 14.00 | 1.27 | 12.00 |
| 28 | .65 | 7.53 | 1.10 | .41 | .20 | 13.00 | 1.89 | .91 | 14.00 | 22.00 | 1.21 | 12.00 |
| 29 | .63 | 7.15 | 1.04 | .40 | --- | 12.00 | 1.79 | .89 | 9.66 | 11.00 | 1.11 | 11.00 |
| 30 | .62 | 6.70 | .97 | .40 | --- | 13.00 | 1.77 | .87 | 7.62 | 7.47 | 1.08 | 10.00 |
| 31 | .80 | --- | .91 | .38 | --- | 7.68 | --- | .80 | --- | 6.98 | 1.02 | --- |
| TOTAL | 33.30 | 231.66 | 88.22 | 16.73 | 8.30 | 408.14 | 104.88 | 38.18 | 396.77 | 215.00 | 167.35 | 2560.63 |
| MEAN | 1.07 | 7.72 | 2.85 | .54 | .30 | 13.20 | 3.50 | 1.23 | 13.20 | 6.94 | 5.40 | 85.30 |

WTR YR 1986 TOTAL 4269.16 MEAN 11.70

### SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .09 | 2.1 | 1.1 | .10 | .17 | .14 | 4.5 | .27 | .18 | .44 | 11 | .01 |
| 2 | .10 | 2.6 | .94 | .10 | .14 | .09 | 2.9 | .24 | .19 | .39 | 5.7 | .01 |
| 3 | .11 | 3.1 | .82 | .10 | .11 | .05 | 7.4 | .21 | .20 | .34 | .66 | .01 |
| 4 | .14 | 2.0 | .70 | .11 | .11 | .04 | 2.2 | .19 | .21 | .31 | .20 | .01 |
| 5 | .15 | 1.8 | .61 | .13 | .11 | .02 | 1.6 | .18 | .23 | .29 | .06 | .01 |
| 6 | .15 | 1.1 | .51 | .16 | .10 | .02 | 1.5 | .18 | .23 | .27 | .04 | .01 |
| 7 | .14 | .91 | .46 | .18 | .10 | .02 | 1.4 | .18 | .21 | .25 | .04 | .01 |
| 8 | .12 | .71 | .43 | .22 | .10 | .02 | 1.4 | .18 | .18 | .23 | .03 | .01 |
| 9 | .13 | .60 | .38 | .27 | .10 | .02 | 1.3 | .19 | .14 | .21 | .03 | .02 |
| 10 | .12 | .49 | .35 | .28 | .10 | .13 | 1.2 | .19 | .13 | .19 | .02 | 2350 |
| 11 | .11 | .40 | .31 | .28 | .10 | .31 | 1.1 | .20 | 26 | 1.1 | .02 | 818 |
| 12 | .13 | .36 | .28 | .27 | .09 | .34 | 1.1 | .20 | 3.4 | 6.0 | .02 | 4.4 |
| 13 | .10 | .42 | .24 | .26 | .09 | .35 | 1.0 | .20 | .54 | .53 | .02 | 3.1 |
| 14 | .09 | .51 | .22 | .26 | .10 | .40 | 3.0 | .21 | .42 | .23 | .02 | 2.1 |
| 15 | .09 | .58 | .21 | .26 | .10 | .86 | 3.0 | .22 | .34 | .41 | .02 | 1.5 |
| 16 | .10 | 7.2 | .19 | .24 | .11 | 1.7 | 2.0 | .22 | .30 | .26 | .02 | 1.1 |
| 17 | .12 | 2.8 | .16 | .24 | .11 | 2.4 | 1.4 | .20 | .26 | .20 | 144 | .90 |
| 18 | .14 | 7.0 | .16 | .24 | .12 | 23 | 1.0 | .16 | .23 | .16 | .21 | .74 |
| 19 | .15 | 5.3 | .13 | .25 | .12 | 47 | .87 | .14 | 27 | .15 | .16 | .66 |
| 20 | .17 | 2.9 | .13 | .25 | .13 | 12 | .84 | .13 | .47 | .12 | .13 | .54 |
| 21 | .19 | 2.1 | .12 | .24 | .14 | 6.5 | .76 | .14 | .23 | .10 | .11 | 34 |
| 22 | .20 | 2.2 | .12 | .24 | .15 | 6.2 | .70 | .14 | .20 | .08 | .09 | 565 |
| 23 | .21 | 2.3 | .12 | .24 | .16 | 59 | .63 | .14 | .18 | .07 | .08 | 3.8 |
| 24 | .22 | 2.4 | .12 | .25 | .16 | 21 | .56 | .15 | .15 | .09 | .06 | 3.1 |
| 25 | .21 | 2.4 | .12 | .25 | .17 | 223 | .51 | .15 | .12 | 94 | .05 | 2.8 |
| 26 | .21 | 2.4 | .13 | .25 | .18 | 17 | .48 | .16 | 174 | 1.3 | .04 | 1.8 |
| 27 | .20 | 2.0 | .12 | .23 | .18 | 7.4 | .41 | .17 | 291 | 6.9 | .04 | 1.6 |
| 28 | .15 | 1.7 | .11 | .22 | .19 | 5.3 | .37 | .17 | 2.8 | 5.7 | .03 | 1.6 |
| 29 | .15 | 1.5 | .11 | .23 | --- | 6.5 | .33 | .18 | .65 | .54 | .02 | 1.5 |
| 30 | .15 | 1.2 | .11 | .23 | --- | 5.6 | .30 | .19 | .52 | .16 | .02 | 1.4 |
| 31 | .22 | --- | .10 | .19 | --- | 3.3 | --- | .18 | --- | 5.0 | .02 | --- |
| TOTAL | 4.56 | 63.08 | 9.61 | 6.77 | 3.54 | 449.71 | 45.76 | 5.66 | 530.71 | 126.02 | 162.96 | 3799.74 |
| MEAN | .15 | 2.1 | .31 | .22 | .13 | 15 | 1.5 | .18 | 18 | 4.1 | 5.3 | 127 |

WTR YR 1986 TOTAL 5208.12 MEAN 14

## 04073500 FOX RIVER AT BERLIN, WI

LOCATION.--Lat 43°57'14", long 88°57'08", in NE 1/4 sec.16, T.17 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, on left bank, 0.4 mi downstream from government dam, 1.0 mi south of Huron Street bridge in Berlin, 2.5 mi upstream from Barnes Creek, and at mile 89.0.

DRAINAGE AREA.--1,340 mi$^2$.

PERIOD OF RECORD.--January 1898 to current year.

REVISED RECORDS.--WSP 1337: 1910. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 744.52 ft above mean tide at New York City (by U.S. Army Corps of Engineers). Prior to Oct. 27, 1954, nonrecording gage at site 0.3 mi upstream at same datum.

REMARKS.--Estimated daily discharges: June 21-26, June 28 to July 2, July 4-10, 12-17, and ice period listed in rating table below. Records good except those for estimated periods and period of ice effect, which are fair. Usually less than about 20 ft$^3$/s was diverted into the basin from the Wisconsin River at Portage Canal throughout the year. Data-collection platform and gage-height telemeter at station.

AVERAGE DISCHARGE.--88 years, 1,122 ft$^3$/s, 11.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft$^3$/s Mar. 17, 18, 1946, gage height, 15.5 ft; minimum observed, 248 ft$^3$/s Sept. 16, 1948, gage height, 6.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,960 ft$^3$/s Mar. 26, gage height, 14.96 ft; minimum daily discharge, 710 ft$^3$/s Sept. 8.

RATING TABLE (gage height, in feet, and discharge in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 25 to Mar. 24.)

| | | | |
|---|---|---|---|
| 8.5 | 690 | 12.0 | 2,560 |
| 9.0 | 910 | 13.0 | 3,280 |
| 10.0 | 1,370 | 14.0 | 4,100 |
| 11.0 | 1,950 | 15.0 | 5,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1450 | 1530 | 2700 | 1300 | 1200 | 1300 | 4340 | 2070 | 1070 | 1400 | 1260 | 834 |
| 2 | 1450 | 1760 | 2800 | 1300 | 1200 | 1300 | 4200 | 1990 | 1010 | 1400 | 1300 | 820 |
| 3 | 1450 | 1900 | 2800 | 1300 | 1200 | 1300 | 4110 | 1920 | 977 | 1490 | 1270 | 798 |
| 4 | 1470 | 2030 | 2700 | 1300 | 1200 | 1300 | 4090 | 1890 | 959 | 1500 | 1240 | 788 |
| 5 | 1490 | 2150 | 2600 | 1300 | 1200 | 1300 | 4070 | 1840 | 929 | 1500 | 1220 | 775 |
| 6 | 1470 | 2250 | 2500 | 1300 | 1200 | 1300 | 4030 | 1800 | 937 | 1500 | 1190 | 757 |
| 7 | 1460 | 2320 | 2400 | 1300 | 1200 | 1300 | 3960 | 1720 | 960 | 1500 | 1170 | 714 |
| 8 | 1450 | 2360 | 2300 | 1200 | 1200 | 1300 | 3860 | 1640 | 973 | 1400 | 1140 | 710 |
| 9 | 1450 | 2400 | 2200 | 1200 | 1200 | 1400 | 3750 | 1550 | 946 | 1400 | 1050 | 714 |
| 10 | 1420 | 2420 | 2100 | 1200 | 1200 | 1400 | 3650 | 1470 | 914 | 1400 | 1020 | 852 |
| 11 | 1400 | 2400 | 2000 | 1200 | 1200 | 1400 | 3530 | 1390 | 942 | 1400 | 982 | 1350 |
| 12 | 1420 | 2390 | 1900 | 1200 | 1200 | 1500 | 3410 | 1320 | 1070 | 1400 | 964 | 1640 |
| 13 | 1430 | 2400 | 1800 | 1200 | 1300 | 1500 | 3310 | 1220 | 1100 | 1300 | 955 | 1900 |
| 14 | 1440 | 2420 | 1800 | 1200 | 1300 | 1600 | 3220 | 1100 | 1110 | 1300 | 946 | 2110 |
| 15 | 1440 | 2440 | 1700 | 1200 | 1300 | 1600 | 3210 | 1040 | 1110 | 1200 | 932 | 2260 |
| 16 | 1450 | 2530 | 1700 | 1200 | 1300 | 1700 | 3140 | 1140 | 1100 | 1200 | 906 | 2350 |
| 17 | 1470 | 2610 | 1600 | 1200 | 1300 | 1800 | 3070 | 1180 | 1070 | 1200 | 901 | 2420 |
| 18 | 1490 | 2700 | 1600 | 1200 | 1300 | 1900 | 2990 | 1220 | 1040 | 1140 | 919 | 2460 |
| 19 | 1500 | 2800 | 1600 | 1200 | 1300 | 2200 | 2940 | 1240 | 1020 | 1110 | 928 | 2500 |
| 20 | 1500 | 2850 | 1500 | 1200 | 1300 | 2700 | 2870 | 1230 | 1050 | 1110 | 910 | 2540 |
| 21 | 1480 | 2860 | 1500 | 1200 | 1300 | 3400 | 2810 | 1240 | 1100 | 1080 | 888 | 2580 |
| 22 | 1480 | 2860 | 1500 | 1200 | 1300 | 3900 | 2730 | 1240 | 1100 | 1050 | 847 | 2880 |
| 23 | 1470 | 2840 | 1500 | 1200 | 1300 | 4300 | 2650 | 1240 | 1100 | 1050 | 852 | 3160 |
| 24 | 1490 | 2780 | 1400 | 1200 | 1300 | 4500 | 2580 | 1220 | 1100 | 1020 | 820 | 3460 |
| 25 | 1480 | 2700 | 1400 | 1200 | 1300 | 4870 | 2480 | 1210 | 1100 | 1100 | 820 | 3790 |
| 26 | 1470 | 2700 | 1400 | 1200 | 1300 | 4940 | 2410 | 1190 | 1100 | 1200 | 829 | 4080 |
| 27 | 1470 | 2700 | 1400 | 1200 | 1300 | 4820 | 2350 | 1160 | 1150 | 1250 | 824 | 4310 |
| 28 | 1450 | 2600 | 1400 | 1200 | 1300 | 4750 | 2280 | 1130 | 1200 | 1280 | 820 | 4470 |
| 29 | 1430 | 2600 | 1400 | 1200 | --- | 4650 | 2190 | 1120 | 1200 | 1280 | 802 | 4620 |
| 30 | 1410 | 2600 | 1400 | 1200 | --- | 4550 | 2130 | 1100 | 1300 | 1280 | 802 | 4690 |
| 31 | 1390 | --- | 1400 | 1200 | --- | 4450 | --- | 1090 | --- | 1270 | 829 | --- |
| TOTAL | 45120 | 73900 | 58000 | 37900 | 35200 | 80240 | 96360 | 42910 | 31737 | 39710 | 30336 | 67332 |
| MEAN | 1455 | 2463 | 1871 | 1223 | 1257 | 2588 | 3212 | 1384 | 1058 | 1281 | 979 | 2244 |
| MAX | 1500 | 2860 | 2800 | 1300 | 1300 | 4940 | 4340 | 2070 | 1300 | 1500 | 1300 | 4690 |
| MIN | 1390 | 1530 | 1400 | 1200 | 1200 | 1300 | 2130 | 1040 | 914 | 1020 | 802 | 710 |
| CFSM | 1.09 | 1.84 | 1.40 | .91 | .94 | 1.93 | 2.40 | 1.03 | .79 | .96 | .73 | 1.68 |
| IN. | 1.25 | 2.05 | 1.61 | 1.05 | .98 | 2.23 | 2.68 | 1.19 | .88 | 1.10 | .84 | 1.87 |

CAL YR 1985 TOTAL 594691 MEAN 1629 MAX 3780 MIN 519 CFSM 1.22 IN 16.51
WTR YR 1986 TOTAL 638745 MEAN 1750 MAX 4940 MIN 710 CFSM 1.31 IN 17.73

## 04074538 SWAMP CREEK ABOVE RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°29'18", long 88°57'49", in SW 1/4 NW 1/4 sec.26, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, on right bank, approximately 200 ft upstream from bridge on State Highway 55, on Mole Lake Indian Reservation.

DRAINAGE AREA.--46.3 mi$^2$.

PERIOD OF RECORD.--August 1977 to September 1983, October 1984 to December 1986 (discontinued).

REVISED RECORD.--WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,532.28 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation).

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--8 years (water years 1978-83, 1985-86), 33.0 ft$^3$/s, 9.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228 ft$^3$/s June 15, 1981, gage height, 3.82 ft; minimum, 6.8 ft$^3$/s Aug. 25, 1977.

EXTREMES FOR CURRENT PERIOD.--Water year 1986: Maximum discharge, 204 ft$^3$/s Apr. 1, gage height, 3.56 ft; minimum, 13 ft$^3$/s Sept. 9, gage height, 2.09 ft.

October to December 1986: Maximum discharge during period, 202 ft$^3$/s Oct. 13, gage height, 3.55 ft; minimum, 19 ft$^3$/s Nov. 14, gage height, 2.22 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 23 to Jan. 8, Feb. 10 to Mar. 2, and Mar. 7-25.)

| | | | |
|---|---|---|---|
| 2.0 | 11 | 2.7 | 50 |
| 2.1 | 15 | 3.0 | 90 |
| 2.3 | 23 | 3.3 | 145 |
| 2.5 | 34 | 3.6 | 214 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 88 | 51 | 37 | 33 | 31 | 26 | 196 | 48 | 21 | 21 | 32 | 19 |
| 2 | 65 | 136 | 39 | 33 | 31 | 27 | 173 | 44 | 20 | 21 | 34 | 40 |
| 3 | 47 | 150 | 48 | 33 | 31 | 28 | 112 | 40 | 17 | 20 | 33 | 24 |
| 4 | 48 | 109 | 53 | 33 | 31 | 28 | 86 | 38 | 16 | 22 | 30 | 21 |
| 5 | 103 | 75 | 50 | 33 | 31 | 28 | 86 | 37 | 18 | 28 | 29 | 21 |
| 6 | 128 | 57 | 48 | 33 | 31 | 28 | 150 | 36 | 16 | 24 | 42 | 19 |
| 7 | 89 | 52 | 46 | 33 | 30 | 27 | 151 | 34 | 16 | 21 | 43 | 21 |
| 8 | 67 | 46 | 45 | 33 | 30 | 26 | 108 | 34 | 18 | 19 | 38 | 18 |
| 9 | 59 | 42 | 43 | 33 | 29 | 26 | 83 | 33 | 17 | 25 | 34 | 14 |
| 10 | 55 | 40 | 42 | 32 | 28 | 26 | 72 | 32 | 20 | 24 | 33 | 24 |
| 11 | 53 | 36 | 42 | 32 | 27 | 26 | 65 | 31 | 34 | 22 | 36 | 43 |
| 12 | 49 | 37 | 40 | 32 | 26 | 27 | 61 | 31 | 36 | 23 | 31 | 42 |
| 13 | 47 | 36 | 39 | 30 | 26 | 27 | 55 | 31 | 29 | 26 | 27 | 32 |
| 14 | 45 | 36 | 38 | 30 | 26 | 28 | 59 | 31 | 23 | 26 | 26 | 28 |
| 15 | 41 | 34 | 38 | 31 | 26 | 29 | 78 | 31 | 20 | 25 | 27 | 35 |
| 16 | 37 | 35 | 38 | 30 | 26 | 30 | 75 | 35 | 18 | 49 | 26 | 40 |
| 17 | 35 | 38 | 38 | 31 | 26 | 30 | 64 | 35 | 17 | 44 | 27 | 33 |
| 18 | 34 | 40 | 37 | 31 | 26 | 30 | 56 | 34 | 17 | 33 | 27 | 28 |
| 19 | 34 | 64 | 36 | 30 | 27 | 30 | 54 | 31 | 20 | 42 | 26 | 25 |
| 20 | 31 | 68 | 36 | 30 | 28 | 31 | 52 | 29 | 24 | 39 | 24 | 27 |
| 21 | 29 | 51 | 36 | 29 | 28 | 31 | 50 | 28 | 21 | 33 | 23 | 27 |
| 22 | 29 | 48 | 36 | 29 | 28 | 32 | 46 | 27 | 22 | 27 | 21 | 51 |
| 23 | 31 | 44 | 35 | 30 | 28 | 33 | 44 | 29 | 25 | 24 | 24 | 63 |
| 24 | 40 | 39 | 35 | 30 | 28 | 35 | 41 | 25 | 32 | 23 | 25 | 45 |
| 25 | 41 | 30 | 35 | 30 | 28 | 37 | 41 | 26 | 28 | 31 | 23 | 42 |
| 26 | 40 | 34 | 35 | 31 | 28 | 51 | 50 | 28 | 23 | 29 | 23 | 49 |
| 27 | 34 | 39 | 34 | 31 | 27 | 55 | 55 | 27 | 33 | 26 | 24 | 66 |
| 28 | 31 | 40 | 34 | 31 | 26 | 59 | 47 | 25 | 34 | 29 | 23 | 76 |
| 29 | 29 | 40 | 34 | 31 | --- | 79 | 45 | 24 | 28 | 30 | 20 | 60 |
| 30 | 29 | 39 | 34 | 31 | --- | 101 | 46 | 22 | 24 | 29 | 18 | 46 |
| 31 | 28 | --- | 34 | 31 | --- | 130 | --- | 21 | --- | 32 | 16 | --- |
| TOTAL | 1516 | 1586 | 1215 | 970 | 788 | 1201 | 2301 | 977 | 687 | 867 | 865 | 1079 |
| MEAN | 48.9 | 52.9 | 39.2 | 31.3 | 28.1 | 38.7 | 76.7 | 31.5 | 22.9 | 28.0 | 27.9 | 36.0 |
| MAX | 128 | 150 | 53 | 33 | 31 | 130 | 196 | 48 | 36 | 49 | 43 | 76 |
| MIN | 28 | 30 | 34 | 29 | 26 | 26 | 41 | 21 | 16 | 19 | 16 | 14 |
| CFSM | 1.06 | 1.14 | .85 | .68 | .61 | .84 | 1.66 | .68 | .50 | .61 | .60 | .78 |
| IN. | 1.22 | 1.27 | .98 | .78 | .63 | .96 | 1.85 | .78 | .55 | .70 | .69 | .87 |

CAL YR 1985 TOTAL 14467 MEAN 39.6 MAX 150 MIN15 CFSM .86 IN 11.62
WTR YR 1986 TOTAL 14052 MEAN 38.5 MAX 196 MIN14 CFSM .83 IN 11.29

BEST COPY AVAILABLE

## 04074538 SWAMP CREEK ABOVE RICE LAKE AT MOLE LAKE, WI--CONTINUED

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41 | 34 | 27 | | | | | | | | | |
| 2 | 38 | 33 | 27 | | | | | | | | | |
| 3 | 36 | 32 | 28 | | | | | | | | | |
| 4 | 40 | 31 | 27 | | | | | | | | | |
| 5 | 43 | 30 | 29 | | | | | | | | | |
| 6 | 37 | 30 | 29 | | | | | | | | | |
| 7 | 35 | 30 | 28 | | | | | | | | | |
| 8 | 39 | 33 | 27 | | | | | | | | | |
| 9 | 47 | 37 | 28 | | | | | | | | | |
| 10 | 46 | 32 | 26 | | | | | | | | | |
| 11 | 38 | 29 | 27 | | | | | | | | | |
| 12 | 117 | 28 | 27 | | | | | | | | | |
| 13 | 193 | 23 | 26 | | | | | | | | | |
| 14 | 135 | 20 | 26 | | | | | | | | | |
| 15 | 91 | 24 | 27 | | | | | | | | | |
| 16 | 71 | 27 | 27 | | | | | | | | | |
| 17 | 59 | 27 | 27 | | | | | | | | | |
| 18 | 51 | 23 | 27 | | | | | | | | | |
| 19 | 46 | 21 | 27 | | | | | | | | | |
| 20 | 43 | 25 | 26 | | | | | | | | | |
| 21 | 40 | 29 | 24 | | | | | | | | | |
| 22 | 39 | 29 | 25 | | | | | | | | | |
| 23 | 38 | 29 | 25 | | | | | | | | | |
| 24 | 37 | 29 | 26 | | | | | | | | | |
| 25 | 36 | 29 | 26 | | | | | | | | | |
| 26 | 36 | 29 | 26 | | | | | | | | | |
| 27 | 35 | 29 | 26 | | | | | | | | | |
| 28 | 34 | 30 | 25 | | | | | | | | | |
| 29 | 34 | 28 | 25 | | | | | | | | | |
| 30 | 33 | 28 | 26 | | | | | | | | | |
| 31 | 32 | --- | 27 | | | | | | | | | |
| TOTAL | 1640 | 858 | 824 | | | | | | | | | |
| MEAN | 52.9 | 28.6 | 26.6 | | | | | | | | | |
| MAX | 193 | 37 | 29 | | | | | | | | | |
| MIN | 32 | 20 | 24 | | | | | | | | | |
| CFSM | 1.14 | .62 | .58 | | | | | | | | | |
| IN. | 1.32 | .69 | .66 | | | | | | | | | |

## 04074950 WOLF RIVER AT LANGLADE, WI

LOCATION.--Lat 45°11'24", long 88°44'00", between secs. 3 and 10, T.31 N., R.14 E., Langlade County, Hydrologic Unit 04030202, on left bank, upstream of bridge on State Highway 64 at Langlade, 1.5 mi east of White Lake, 3.0 mi upstream from White Lake Creek, and at about mile 170 above mouth.

DRAINAGE AREA.--463 mi$^2$.

PERIOD OF RECORD.--March 1966 to September 1979, October 1980 to current year.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,240 ft, from topographic map. Prior to Oct. 1, 1976, nonrecording gage 50 ft downstream at same elevation.

REMARKS.--Estimated daily discharges: Nov. 21 to Mar. 29. Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--19 years (water years 1967-79, 1981-86), 464 ft$^3$/s, 13.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,200 ft$^3$/s Mar. 15, 1973, gage height, 9.48 ft; maximum gage height, 10.06 ft Dec. 20, 21, 24, 1984, backwater from ice; minimum discharge, 119 ft$^3$/s Nov. 8, 1976, gage height, 7.24 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,960 ft$^3$/s Apr. 6, gage height, 9.97 ft; minimum discharge, 266 ft$^3$/s, June 18, gage height, 7.67 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 22 to Mar. 29.)

| | | | |
|---|---|---|---|
| 7.6 | 241 | 9.0 | 1,000 |
| 8.0 | 390 | 9.5 | 1,460 |
| 8.5 | 640 | 10.0 | 2,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 987 | 666 | 600 | 520 | 370 | 390 | 1480 | 657 | 297 | 318 | 348 | 291 |
| 2 | 904 | 1160 | 540 | 520 | 370 | 400 | 1660 | 679 | 291 | 308 | 374 | 288 |
| 3 | 870 | 1130 | 480 | 520 | 370 | 400 | 1650 | 670 | 286 | 290 | 373 | 288 |
| 4 | 1040 | 992 | 580 | 500 | 370 | 400 | 1630 | 653 | 282 | 292 | 371 | 305 |
| 5 | 1350 | 946 | 640 | 500 | 370 | 400 | 1700 | 592 | 289 | 307 | 381 | 310 |
| 6 | 1350 | 978 | 640 | 500 | 370 | 390 | 1910 | 531 | 295 | 296 | 430 | 306 |
| 7 | 1230 | 1020 | 640 | 500 | 380 | 380 | 1930 | 492 | 289 | 296 | 476 | 304 |
| 8 | 1180 | 1000 | 640 | 480 | 380 | 380 | 1800 | 474 | 287 | 285 | 513 | 298 |
| 9 | 1140 | 952 | 700 | 470 | 380 | 380 | 1670 | 461 | 277 | 284 | 481 | 294 |
| 10 | 1100 | 893 | 720 | 460 | 380 | 370 | 1550 | 446 | 272 | 276 | 463 | 363 |
| 11 | 1050 | 840 | 680 | 440 | 380 | 360 | 1440 | 404 | 297 | 276 | 457 | 449 |
| 12 | 999 | 786 | 640 | 440 | 380 | 350 | 1330 | 398 | 345 | 304 | 434 | 462 |
| 13 | 988 | 746 | 640 | 440 | 380 | 360 | 1230 | 398 | 349 | 362 | 406 | 450 |
| 14 | 919 | 711 | 600 | 440 | 370 | 370 | 1160 | 394 | 333 | 357 | 402 | 455 |
| 15 | 863 | 672 | 560 | 440 | 370 | 390 | 1210 | 394 | 322 | 347 | 410 | 516 |
| 16 | 806 | 609 | 560 | 420 | 370 | 400 | 1180 | 420 | 314 | 396 | 398 | 549 |
| 17 | 757 | 555 | 560 | 420 | 370 | 400 | 1090 | 400 | 312 | 418 | 397 | 523 |
| 18 | 726 | 567 | 560 | 410 | 370 | 410 | 1010 | 395 | 275 | 407 | 384 | 511 |
| 19 | 639 | 703 | 560 | 410 | 380 | 400 | 965 | 380 | 288 | 538 | 350 | 507 |
| 20 | 557 | 703 | 540 | 410 | 390 | 390 | 918 | 365 | 297 | 658 | 330 | 505 |
| 21 | 500 | 800 | 540 | 420 | 400 | 400 | 870 | 349 | 293 | 639 | 322 | 501 |
| 22 | 490 | 840 | 540 | 420 | 400 | 410 | 814 | 340 | 299 | 617 | 318 | 571 |
| 23 | 494 | 800 | 540 | 410 | 390 | 420 | 766 | 337 | 298 | 579 | 326 | 589 |
| 24 | 544 | 740 | 540 | 410 | 390 | 430 | 722 | 335 | 294 | 532 | 324 | 555 |
| 25 | 545 | 680 | 540 | 400 | 380 | 440 | 599 | 341 | 292 | 538 | 316 | 595 |
| 26 | 536 | 660 | 540 | 390 | 380 | 540 | 517 | 341 | 296 | 444 | 314 | 676 |
| 27 | 542 | 640 | 520 | 380 | 380 | 620 | 534 | 335 | 427 | 378 | 316 | 871 |
| 28 | 545 | 640 | 520 | 370 | 380 | 700 | 535 | 328 | 418 | 355 | 313 | 941 |
| 29 | 540 | 620 | 520 | 360 | --- | 840 | 546 | 321 | 361 | 342 | 306 | 952 |
| 30 | 530 | 600 | 520 | 350 | --- | 1040 | 589 | 310 | 336 | 337 | 303 | 928 |
| 31 | 493 | --- | 520 | 360 | --- | 1190 | --- | 302 | --- | 347 | 296 | --- |
| TOTAL | 25214 | 23649 | 17920 | 13510 | 10600 | 14750 | 35005 | 13242 | 9311 | 12123 | 11632 | 15153 |
| MEAN | 813 | 788 | 578 | 436 | 379 | 476 | 1167 | 427 | 310 | 391 | 375 | 505 |
| MAX | 1350 | 1160 | 720 | 520 | 400 | 1190 | 1930 | 679 | 427 | 658 | 513 | 952 |
| MIN | 490 | 555 | 480 | 350 | 370 | 350 | 517 | 302 | 272 | 276 | 296 | 288 |
| CFSM | 1.76 | 1.70 | 1.25 | .94 | .82 | 1.03 | 2.52 | .92 | .67 | .84 | .81 | 1.09 |
| IN. | 2.03 | 1.90 | 1.44 | 1.09 | .85 | 1.19 | 2.81 | 1.06 | .75 | .97 | .93 | 1.22 |

CAL YR 1985 TOTAL 194005 MEAN 532 MAX 1440 MIN 257 CFSM 1.15 IN 15.59
WTR YR 1986 TOTAL 202109 MEAN 554 MAX 1930 MIN 272 CFSM 1.20 IN 16.24

## 04077400 WOLF RIVER NEAR SHAWANO, WI
(Formerly published as Wolf River at Keshena Falls near Keshena)

**LOCATION.**--Lat 44°50'09", long 88°37'30", in SE 1/4 NW 1/4 sec.12, T.27 N., R.15 E., Shawano County, Hydrologic Unit 04030202, on left bank 350 ft downstream from dam, 3.7 mi north of Shawano, 1.5 mi upstream from Red River, and at mile 130.6.

**DRAINAGE AREA.**--816 mi$^2$.

**PERIOD OF RECORD.**--May 1907 to March 1909, October 1910 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as "at Keshena" prior to April 1928. Published as "at Keshena Falls" April 1928 to September 1981. Published as "at Keshena Falls near Keshena" October 1981 to September 1985.

**REVISED RECORDS.**--WSP 1337: 1914-15(M), 1918-19(M), 1921, 1923(M), 1926(M), 1928(M), 1933. WDR WI-80-1: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 810 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 23, 1928, nonrecording gage at bridge in Keshena 4.1 mi upstream at different datum, and from Mar. 23, 1928 to Sept. 30, 1985, water-stage recorder at site 5.8 mi upstream at different datum.

**REMARKS.**--Estimated daily discharges: None, except for ice period listed in table below. Records good except for ice-affected period, which is fair.

**AVERAGE DISCHARGE.**--77 years (1907-8, 1910-86), 766 ft$^3$/s, 12.75 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge 5,200 ft$^3$/s Mar. 15, 1973; maximum gage height, 15.59 ft Dec. 2, 1983, from high-water mark in well, at site and datum then in use (backwater from ice); minimum discharge, 91 ft$^3$/s Dec. 22, 1939, gage height, 4.67 ft, site and datum then in use, result of ice storage.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 4,440 ft$^3$/s, Apr. 1, gage height 12.91 ft; minimum daily, 483 ft$^3$/s June 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 24 to Mar. 30.)

| | | | |
|---|---|---|---|
| 7.8 | 480 | 10.0 | 2,030 |
| 8.0 | 590 | 12.0 | 3,630 |
| 9.0 | 1,260 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2130 | 1300 | 1100 | 1100 | 820 | 880 | 2720 | 1060 | 516 | 640 | 831 | 596 |
| 2 | 1940 | 2520 | 1000 | 1100 | 840 | 880 | 2830 | 1070 | 557 | 595 | 712 | 555 |
| 3 | 1480 | 2970 | 900 | 1100 | 840 | 900 | 2790 | 1020 | 517 | 567 | 772 | 607 |
| 4 | 1360 | 2500 | 1000 | 1100 | 860 | 940 | 2420 | 976 | 529 | 577 | 770 | 619 |
| 5 | 2270 | 1910 | 1100 | 1000 | 880 | 960 | 2290 | 950 | 541 | 642 | 706 | 601 |
| 6 | 2450 | 1680 | 1200 | 1100 | 900 | 1000 | 2920 | 916 | 534 | 611 | 762 | 615 |
| 7 | 2280 | 1590 | 1200 | 1100 | 880 | 960 | 3090 | 854 | 483 | 595 | 818 | 575 |
| 8 | 1980 | 1520 | 1200 | 1000 | 880 | 940 | 2850 | 787 | 572 | 607 | 890 | 601 |
| 9 | 1790 | 1480 | 1100 | 1000 | 880 | 940 | 2490 | 723 | 496 | 609 | 888 | 601 |
| 10 | 1630 | 1430 | 1200 | 1000 | 860 | 980 | 2180 | 739 | 591 | 569 | 838 | 790 |
| 11 | 1440 | 1330 | 1200 | 1000 | 860 | 1000 | 2010 | 709 | 568 | 562 | 814 | 820 |
| 12 | 1530 | 1260 | 1100 | 980 | 840 | 1000 | 1910 | 682 | 751 | 626 | 792 | 1040 |
| 13 | 1430 | 1250 | 1000 | 960 | 840 | 1000 | 1750 | 716 | 764 | 799 | 714 | 908 |
| 14 | 1440 | 1230 | 960 | 960 | 840 | 1100 | 1640 | 748 | 701 | 764 | 700 | 817 |
| 15 | 1320 | 1200 | 1000 | 940 | 840 | 1100 | 1900 | 794 | 608 | 829 | 835 | 921 |
| 16 | 1200 | 1210 | 1100 | 900 | 820 | 1100 | 1880 | 824 | 578 | 945 | 879 | 1070 |
| 17 | 1200 | 1220 | 1200 | 900 | 840 | 1100 | 1790 | 884 | 574 | 917 | 846 | 1040 |
| 18 | 1170 | 1140 | 1100 | 900 | 840 | 1200 | 1580 | 937 | 554 | 854 | 774 | 953 |
| 19 | 1110 | 1300 | 1100 | 860 | 860 | 1300 | 1580 | 841 | 608 | 1080 | 711 | 933 |
| 20 | 946 | 1570 | 1100 | 880 | 860 | 1300 | 1430 | 727 | 690 | 1230 | 660 | 962 |
| 21 | 902 | 1110 | 1100 | 880 | 860 | 1400 | 1190 | 672 | 683 | 1280 | 651 | 963 |
| 22 | 835 | 1120 | 1200 | 860 | 860 | 1500 | 1300 | 685 | 636 | 1120 | 621 | 1180 |
| 23 | 812 | 1080 | 1200 | 840 | 860 | 1500 | 1330 | 666 | 599 | 1020 | 685 | 1130 |
| 24 | 986 | 1100 | 1200 | 840 | 860 | 1400 | 1170 | 607 | 619 | 940 | 576 | 1170 |
| 25 | 1040 | 1200 | 1100 | 860 | 860 | 1300 | 1200 | 625 | 570 | 995 | 712 | 1050 |
| 26 | 1020 | 1100 | 1100 | 860 | 880 | 1300 | 1020 | 630 | 517 | 1020 | 668 | 1300 |
| 27 | 943 | 1100 | 1200 | 840 | 900 | 1300 | 898 | 620 | 748 | 850 | 633 | 1680 |
| 28 | 902 | 1100 | 1200 | 800 | 900 | 1400 | 942 | 622 | 919 | 717 | 666 | 1940 |
| 29 | 898 | 1000 | 1200 | 800 | --- | 1700 | 942 | 566 | 891 | 657 | 648 | 1840 |
| 30 | 827 | 1000 | 1100 | 800 | --- | 2100 | 971 | 594 | 671 | 733 | 619 | 1650 |
| 31 | 781 | --- | 1100 | 800 | --- | 2450 | --- | 609 | --- | 802 | 625 | --- |
| TOTAL | 42042 | 42520 | 34560 | 29060 | 24060 | 37930 | 55013 | 23853 | 18585 | 24752 | 22816 | 29527 |
| MEAN | 1356 | 1417 | 1115 | 937 | 859 | 1224 | 1834 | 769 | 620 | 798 | 736 | 984 |
| MAX | 2450 | 2970 | 1200 | 1100 | 900 | 2450 | 3090 | 1070 | 919 | 1280 | 890 | 1940 |
| MIN | 781 | 1000 | 900 | 800 | 820 | 880 | 898 | 566 | 483 | 562 | 576 | 555 |
| CFSM | 1.66 | 1.74 | 1.37 | 1.15 | 1.05 | 1.50 | 2.25 | .94 | .76 | .98 | .90 | 1.21 |
| IN. | 1.92 | 1.94 | 1.58 | 1.32 | 1.10 | 1.73 | 2.51 | 1.09 | .85 | 1.13 | 1.04 | 1.35 |

CAL YR 1985 TOTAL 351961 MEAN 964 MAX 2970 MIN 440 CFSM 1.18 IN 16.05
WTR YR 1986 TOTAL 384718 MEAN 1054 MAX 3090 MIN 483 CFSM 1.29 IN 17.54

## 04079000 WOLF RIVER AT NEW LONDON, WI

LOCATION.--Lat 44°23'32", long 88°44'25", in NE 1/4 SE 1/4 sec.12, T.22 N., R.14 E., Waupaca County, Hydrologic Unit 04030202, on right bank 100 ft downstream from Pearl Street bridge in New London, 0.2 mi downstream from Embarrass River, and at mile 56.3.

DRAINAGE AREA.--2,260 mi$^2$.

PERIOD OF RECORD.--March 1896 to current year. Prior to October 1913 monthly discharges only, published in WSP 1307.

REVISED RECORDS.--WSP 1114: 1943(M). WSP 1337: 1931. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 747.94 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 4, 1951, nonrecording gage.

REMARKS.--Estimated daily discharges: None, except for ice period listed in table below. Records good except those for ice-affected period, which is fair. Gage-height telemeter and data-collection platform at station.

AVERAGE DISCHARGE.--90 years, 1,769 ft$^3$/s, 10.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 15,500 ft$^3$/s Apr. 13, 1922, gage height, 11.4 ft; maximum gage height, 11.83 ft Apr. 3, 1979, backwater from ice; minimum daily, 150 ft$^3$/s Mar. 1, 1900.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Apr. 16, 1888, reached a stage of 11.6 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft$^3$/s Mar. 29, gage height, 10.13 ft; minimum discharge, 886 ft$^3$/s Sept. 9, gage height, 1.72 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 21 to Mar. 28.)

| Oct. 1 to Mar. 29 | | | | Mar. 30 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 2.0 | 1,060 | 6.0 | 3,050 | 1.7 | 880 | 6.0 | 2,800 |
| 3.0 | 1,460 | 7.0 | 3,750 | 2.0 | 980 | 7.0 | 3,440 |
| 4.0 | 1,890 | 8.0 | 5,000 | 3.0 | 1,380 | 8.0 | 4,900 |
| 5.0 | 2,440 | 9.0 | 7,200 | 4.0 | 1,780 | 9.0 | 7,200 |
| | | 11.0 | 13,100 | 5.0 | 2,280 | 11.0 | 13,100 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2660 | 2810 | 3100 | 1900 | 1400 | 1400 | 9590 | 3050 | 1370 | 1960 | 2470 | 981 |
| 2 | 2770 | 3250 | 2900 | 1900 | 1400 | 1400 | 9320 | 2940 | 1290 | 1940 | 2230 | 958 |
| 3 | 2800 | 3610 | 2800 | 1900 | 1400 | 1500 | 9060 | 2850 | 1250 | 1810 | 2020 | 952 |
| 4 | 2890 | 4000 | 2600 | 1900 | 1400 | 1500 | 8860 | 2760 | 1230 | 1630 | 1880 | 952 |
| 5 | 3020 | 4550 | 2500 | 1800 | 1400 | 1500 | 8670 | 2670 | 1200 | 1470 | 1750 | 936 |
| 6 | 3120 | 5560 | 2500 | 1800 | 1400 | 1500 | 8400 | 2580 | 1200 | 1330 | 1600 | 917 |
| 7 | 3310 | 6420 | 2400 | 1800 | 1400 | 1500 | 8090 | 2490 | 1190 | 1250 | 1510 | 895 |
| 8 | 3460 | 6910 | 2400 | 1800 | 1400 | 1500 | 7750 | 2370 | 1190 | 1200 | 1460 | 893 |
| 9 | 3590 | 6990 | 2400 | 1700 | 1400 | 1500 | 7480 | 2250 | 1160 | 1150 | 1420 | 893 |
| 10 | 3720 | 6800 | 2300 | 1700 | 1400 | 1500 | 7310 | 2170 | 1120 | 1070 | 1420 | 1030 |
| 11 | 3850 | 6400 | 2300 | 1700 | 1400 | 1500 | 7170 | 2070 | 1130 | 1040 | 1480 | 1380 |
| 12 | 3980 | 5990 | 2300 | 1700 | 1400 | 1500 | 6950 | 1990 | 1280 | 1130 | 1520 | 1850 |
| 13 | 4100 | 5600 | 2200 | 1700 | 1400 | 1500 | 6600 | 1900 | 1370 | 1210 | 1510 | 2180 |
| 14 | 4130 | 5280 | 2200 | 1600 | 1400 | 1500 | 6270 | 1840 | 1450 | 1270 | 1490 | 2350 |
| 15 | 4110 | 4980 | 2200 | 1600 | 1400 | 1600 | 6040 | 1770 | 1480 | 1400 | 1470 | 2490 |
| 16 | 4010 | 4860 | 2100 | 1600 | 1400 | 1700 | 5730 | 1830 | 1440 | 1430 | 1420 | 2580 |
| 17 | 3910 | 4770 | 2100 | 1600 | 1400 | 1800 | 5490 | 1910 | 1370 | 1530 | 1380 | 2620 |
| 18 | 3790 | 4760 | 2100 | 1600 | 1400 | 1900 | 5310 | 2160 | 1290 | 1770 | 1400 | 2680 |
| 19 | 3690 | 4800 | 2000 | 1600 | 1400 | 2300 | 5140 | 2320 | 1290 | 2000 | 1440 | 2700 |
| 20 | 3600 | 4810 | 2000 | 1600 | 1400 | 2700 | 5040 | 2410 | 1420 | 2150 | 1420 | 2720 |
| 21 | 3490 | 4700 | 2000 | 1500 | 1400 | 2900 | 4920 | 2430 | 1620 | 2230 | 1380 | 2750 |
| 22 | 3380 | 4500 | 2000 | 1500 | 1400 | 3200 | 4780 | 2430 | 1710 | 2310 | 1320 | 2920 |
| 23 | 3280 | 4400 | 2000 | 1500 | 1400 | 3600 | 4530 | 2360 | 1740 | 2340 | 1250 | 3070 |
| 24 | 3200 | 4200 | 2000 | 1500 | 1400 | 4500 | 4250 | 2230 | 1760 | 2380 | 1150 | 3170 |
| 25 | 3140 | 4000 | 1900 | 1500 | 1400 | 5800 | 3970 | 2090 | 1750 | 2630 | 1120 | 3310 |
| 26 | 3100 | 3800 | 1900 | 1500 | 1400 | 7200 | 3740 | 1930 | 1680 | 2790 | 1120 | 3490 |
| 27 | 3040 | 3500 | 1900 | 1500 | 1400 | 9000 | 3540 | 1780 | 1690 | 2910 | 1080 | 3670 |
| 28 | 2980 | 3400 | 1900 | 1400 | 1400 | 9800 | 3370 | 1670 | 1770 | 2960 | 1060 | 3800 |
| 29 | 2910 | 3300 | 1900 | 1400 | --- | 10200 | 3230 | 1570 | 1810 | 2900 | 1040 | 3990 |
| 30 | 2830 | 3200 | 1900 | 1400 | --- | 10100 | 3150 | 1520 | 1890 | 2820 | 1030 | 4140 |
| 31 | 2740 | --- | 1900 | 1400 | --- | 9880 | --- | 1460 | --- | 2670 | 1010 | --- |
| TOTAL | 104600 | 142150 | 68700 | 50600 | 39200 | 108980 | 183750 | 67800 | 43140 | 58680 | 44850 | 67267 |
| MEAN | 3374 | 4738 | 2216 | 1632 | 1400 | 3515 | 6125 | 2187 | 1438 | 1893 | 1447 | 2242 |
| MAX | 4130 | 6990 | 3100 | 1900 | 1400 | 10200 | 9590 | 3050 | 1890 | 2960 | 2470 | 4140 |
| MIN | 2660 | 2810 | 1900 | 1400 | 1400 | 1400 | 3150 | 1460 | 1120 | 1040 | 1010 | 893 |
| CFSM | 1.49 | 2.10 | .98 | .72 | .62 | 1.56 | 2.71 | .97 | .64 | .84 | .64 | .99 |
| IN. | 1.72 | 2.34 | 1.13 | .83 | .65 | 1.79 | 3.02 | 1.12 | .71 | .97 | .74 | 1.11 |

CAL YR 1985 TOTAL 962154 MEAN 2636 MAX 6990 MIN 889 CFSM 1.17 IN 15.84
WTR YR 1986 TOTAL 979717 MEAN 2684 MAX 10200 MIN 893 CFSM 1.19 IN 16.13

## 440654089120500 LAKE MORRIS AT MOUNT MORRIS, WI

LOCATION.--Lat 44°06'54", long 89°12'05", in SE 1/4 SE 1/4 Sec.16, T.19 N., R.11 E., Waushara County, Hydrologic Unit 04030202, at Mount Morris.

DRAINAGE AREA.--8.94 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--June 1983 to current year.

GAGE.--Staff gage read at dam outlet by Henry Pagenkopf.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.82 ft May 1, 1984; minimum observed, 4.93 ft Oct. 21-23, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 5.56 ft, Apr. 1; minimum observed, 4.93 ft Oct. 21-23.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.11 | | | | | | 5.56 | 5.04 | --- | --- | 5.26 | --- |
| 2 | 5.08 | | | | | | 5.50 | 5.02 | 5.32 | --- | 5.25 | --- |
| 3 | 5.02 | | | | | | 5.40 | 5.01 | 5.28 | --- | 5.24 | 5.12 |
| 4 | 5.01 | | | | | | 5.44 | 4.99 | --- | 5.28 | 5.20 | 5.16 |
| 5 | 5.02 | | | | | | 5.46 | 5.00 | 5.30 | 5.28 | 5.21 | 5.22 |
| 6 | 5.00 | | | | | | --- | 4.98 | 5.28 | 5.28 | 5.24 | 5.25 |
| 7 | --- | | | | | | 5.44 | 4.98 | 5.27 | 5.29 | 5.21 | --- |
| 8 | --- | | | | | | 5.44 | --- | 5.26 | 5.28 | 5.16 | --- |
| 9 | --- | | | | | | 5.42 | --- | 5.24 | 5.28 | 5.15 | 5.38 |
| 10 | 5.00 | | | | | | 5.36 | 4.94 | 5.22 | --- | 5.20 | 5.37 |
| 11 | 5.00 | | | | | | 5.32 | 4.95 | 5.20 | --- | 5.20 | --- |
| 12 | 4.99 | | | | | | 5.26 | --- | 5.38 | --- | 5.20 | 5.30 |
| 13 | --- | | | | | | 5.16 | 4.96 | 5.27 | --- | --- | --- |
| 14 | 4.98 | | | | | | 5.22 | 4.95 | 5.22 | 5.24 | 5.23 | 5.20 |
| 15 | 4.96 | | | | | | 5.24 | 5.02 | 5.20 | 5.28 | 5.25 | 5.20 |
| 16 | 4.96 | | | | | | --- | 5.18 | 5.24 | 5.30 | 5.25 | 5.16 |
| 17 | 4.95 | | | | | | 5.22 | 5.30 | 5.25 | --- | 5.26 | --- |
| 18 | 4.95 | | | | | | 5.18 | 5.27 | --- | --- | 5.28 | 5.15 |
| 19 | 4.94 | | | | | | 5.18 | 5.20 | 5.38 | 5.32 | 5.24 | 5.14 |
| 20 | 4.94 | | | | | | 5.16 | 5.15 | 5.32 | 5.36 | --- | --- |
| 21 | 4.93 | | | | | | 5.17 | 5.10 | 5.32 | 5.22 | 5.22 | --- |
| 22 | 4.93 | | | | | | 5.13 | 5.08 | 5.30 | 5.22 | 5.23 | --- |
| 23 | 4.93 | | | | | | 5.09 | 5.12 | 5.28 | 5.20 | 5.23 | 4.98 |
| 24 | 4.99 | | | | | | 5.08 | 5.14 | 5.32 | 5.19 | 5.28 | 5.10 |
| 25 | 5.00 | | | | | | --- | 5.16 | 5.36 | 5.36 | 5.31 | --- |
| 26 | 5.00 | | | | | | 5.09 | 5.18 | 5.38 | 5.30 | 5.24 | --- |
| 27 | --- | | | | | | 5.06 | 5.21 | 5.56 | 5.20 | --- | --- |
| 28 | --- | | | | | | 5.08 | 5.32 | 5.48 | 5.20 | --- | --- |
| 29 | --- | | | | | | 5.05 | --- | 5.42 | 5.15 | 5.18 | --- |
| 30 | --- | | | | | | 5.05 | 5.46 | 5.38 | 5.18 | 5.20 | --- |
| 31 | --- | | | | | | --- | --- | --- | 5.24 | 5.21 | --- |

## 440654089120500 LAKE MORRIS AT MOUNT MORRIS, WI--CONTINUED

## WATER-QUALITY RECORDS

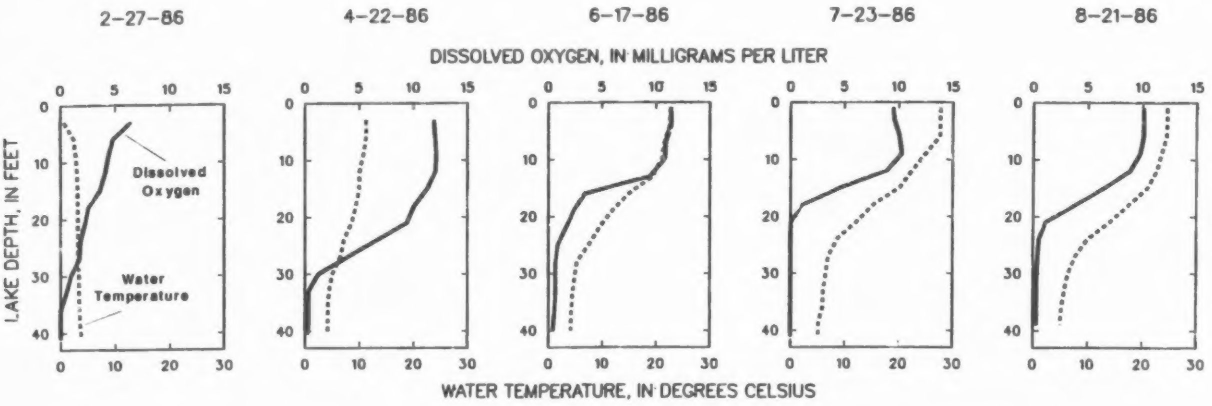
PERIOD OF RECORD.--June 1983 to current year.

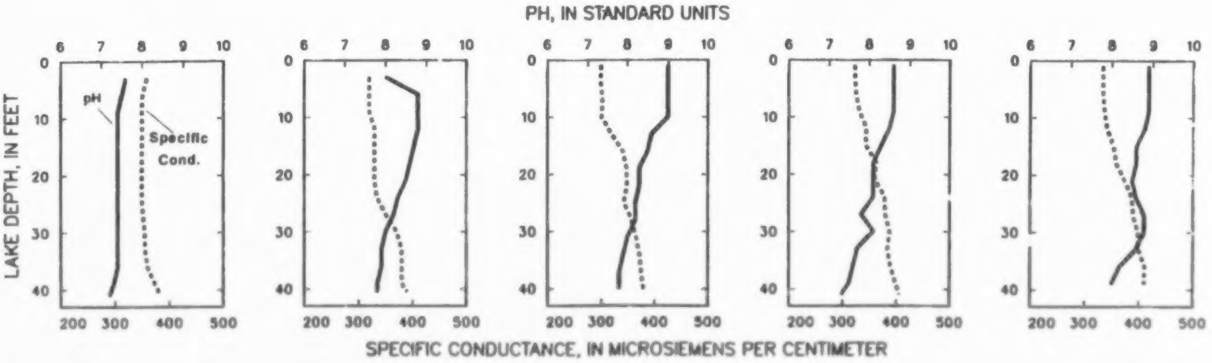
REMARKS.--Lake sampled near center at a depth of 43 feet.

WATER QUALITY DATA, FEBRUARY 27 TO AUGUST 21, 1986
(Milligrams per liter unless otherwise indicated)

| | Feb. 27 | | Apr. 22 | | June 17 | | July 23 | | Aug. 21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 41.0 | 3.0 | 40.5 | 1.0 | 40.0 | 3.0 | 40.5 | 3.0 | 40.0 |
| Specific conductance (uS) | 359 | 384 | 320 | 390 | 300 | 380 | 324 | 406 | 334 | 410 |
| pH | 7.6 | 7.2 | 8.8 | 7.8 | 9.0 | 7.8 | 8.6 | 7.3 | 8.9 | 8.0 |
| Water temperature ($^{o}$C) | 0.5 | 4.0 | 11.5 | 4.0 | 22.5 | 4.0 | 27.5 | 5.0 | 24.5 | 5.0 |
| Color (Pt-Co. scale) | -- | -- | 35 | 10 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 0.6 | 2.4 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- | -- | -- 1.9 -- | | -- 3.8 -- | | -- 4.3 -- | | -- 3.7 -- | |
| Dissolved oxygen | 6.5 | 0.0 | 11.9 | 0.2 | 11.4 | 0.4 | 9.6 | 0.0 | 10.1 | 0.3 |
| Hardness, as $CaCO_3$ | -- | -- | 180 | 210 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 39 | 45 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 20 | 23 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 1.7 | 2.0 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 1.0 | 1.1 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 164 | 191 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 13 | 12 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 2.7 | 2.9 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 8.8 | 17 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180°C | -- | -- | 187 | 224 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .59 | .45 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | .01 | .05 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .02 | .47 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .58 | .33 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.20 | 1.30 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .018 | .050 | .010 | .068 | .009 | .096 | .009 | .190 |
| Phosphorus, ortho, diss (as P) | -- | -- | .002 | .028 | -- | .053 | -- | .091 | -- | .410 |
| Iron, dissolved (Fe) ug/L | -- | -- | 40 | 70 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 3 | 380 | -- | -- | -- | -- | -- | -- |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 9[1/] | -- | 3 | -- | <5 | -- | <5 | -- |

[1/] Adjusted from 6 ug/L by Wisconsin State Laboratory of Hygiene.





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## 04082500 LAKE WINNEBAGO AT OSHKOSH, WI

LOCATION.--Lat 44°00'35", long 88°31'38", in NE 1/4 NE 1/4 sec.25, T.18 N., R.16 E., Winnebago County, Hydrologic Unit 04030203, at 905 Bay Shore Drive, 800 ft east of mouth of the upper Fox River.

DRAINAGE AREA.--5,880 mi$^2$, at lake outlet at Menasha Dam. Area of Lake Winnebago, 215 mi$^2$.

PERIOD OF RECORD.--October 1938 to current year in reports of Geological Survey. Records from 1882 to 1938 in files of Geological Survey and U.S. Army Corps of Engineers. A report on Fox River by U.S. Army Corps of Engineers, published as House Document No. 146, 67th Congress, 2nd session, contains semi-monthly records of inflow of Lake Winnebago for the period 1896-1917.

REVISED RECORD.--WDR WI-83-1: Drainage area.

GAGE.--Water-stage recorder. Nonrecording gage read once daily October 1938 to October 1978. Datum of gage is 745.05 ft above mean tide at New York City (levels by U.S. Army Corps of Engineers). Datum of Deuchman gage is 745.00 ft above mean tide at New York City.

REMARKS.--Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 1/4 in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Oshkosh staff gage gives true level of lake, while Deuchman gage readings are affected by loss of head in the channel between lake and dam. Date-collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.33 ft (Deuchman gage) Nov. 8, 1881; minimum observed, -2.00 ft (Deuchman gage) Nov. 28, 1891.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.57 ft Apr. 14, local condition due to seiche; minimum, 0.35 ft Feb. 27, Mar. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.60 | 2.61 | 3.12 | 2.04 | .92 | .36 | 2.44 | 2.81 | 2.85 | 2.86 | 3.06 | 2.64 |
| 2 | 2.63 | 2.75 | 3.10 | 2.01 | .89 | .37 | 2.58 | 2.89 | 2.80 | 2.88 | 3.03 | 2.64 |
| 3 | 2.63 | 2.84 | 3.04 | 2.00 | .86 | .38 | 2.67 | 2.86 | 2.74 | 2.87 | 2.98 | 2.63 |
| 4 | 2.64 | 2.85 | 2.97 | 1.98 | .86 | .38 | 2.78 | 2.79 | 2.79 | 2.83 | 2.94 | 2.61 |
| 5 | 2.67 | 2.85 | 2.91 | 1.96 | .86 | .39 | 2.86 | 2.77 | 2.81 | 2.86 | 2.89 | 2.61 |
| 6 | 2.77 | 2.82 | 2.86 | 1.93 | .83 | .41 | 2.91 | 2.75 | 2.78 | 2.85 | 2.88 | 2.60 |
| 7 | 2.79 | 2.81 | 2.80 | 1.89 | .79 | .42 | 2.97 | 2.79 | 2.76 | 2.86 | 2.85 | 2.58 |
| 8 | 2.71 | 2.85 | 2.75 | 1.86 | .76 | .43 | 3.04 | 2.80 | 2.80 | 2.86 | 2.82 | 2.53 |
| 9 | 2.77 | 3.01 | 2.71 | 1.81 | .73 | .45 | 3.09 | 2.76 | 2.77 | 2.89 | 2.82 | 2.54 |
| 10 | 2.81 | 3.01 | 2.68 | 1.77 | .70 | .50 | 3.12 | 2.74 | 2.76 | 2.88 | 2.80 | 2.71 |
| 11 | 2.84 | 2.98 | 2.64 | 1.73 | .67 | .56 | 3.12 | 2.73 | 2.84 | 2.86 | 2.79 | 3.17 |
| 12 | 2.89 | 2.94 | 2.60 | 1.69 | .65 | .57 | 3.12 | 2.75 | 2.91 | 2.82 | 2.77 | 3.22 |
| 13 | 2.96 | 3.00 | 2.56 | 1.66 | .62 | .58 | 3.10 | 2.74 | 2.90 | 2.85 | 2.73 | 3.18 |
| 14 | 2.99 | 3.02 | 2.52 | 1.62 | .59 | .60 | 3.10 | 2.74 | 2.88 | 2.90 | 2.71 | 3.13 |
| 15 | 2.98 | 3.12 | 2.49 | 1.59 | .57 | .62 | 3.01 | 2.76 | 2.86 | 2.87 | 2.76 | 3.12 |
| 16 | 3.05 | 3.07 | 2.46 | 1.55 | .56 | .64 | 3.11 | 2.75 | 2.83 | 2.90 | 2.77 | 3.06 |
| 17 | 3.00 | 3.16 | 2.42 | 1.52 | .53 | .68 | 3.13 | 2.83 | 2.83 | 2.90 | 2.81 | 2.99 |
| 18 | 2.99 | 3.22 | 2.38 | 1.46 | .51 | .78 | 3.16 | 2.85 | 2.80 | 2.91 | 2.82 | 2.97 |
| 19 | 3.00 | 3.18 | 2.35 | 1.40 | .48 | .95 | 3.06 | 2.86 | 2.83 | 2.98 | 2.80 | 3.01 |
| 20 | 2.99 | 3.14 | 2.33 | 1.35 | .47 | 1.03 | 3.15 | 2.81 | 2.89 | 3.00 | 2.77 | 2.99 |
| 21 | 2.95 | 3.30 | 2.31 | 1.30 | .46 | 1.09 | 3.14 | 2.80 | 2.83 | 2.97 | 2.80 | 3.01 |
| 22 | 2.93 | 3.24 | 2.29 | 1.25 | .44 | 1.14 | 3.15 | 2.80 | 2.83 | 2.96 | 2.74 | 3.12 |
| 23 | 2.88 | 3.20 | 2.27 | 1.21 | .42 | 1.23 | 3.10 | 2.79 | 2.85 | 2.95 | 2.72 | 3.19 |
| 24 | 2.83 | 3.17 | 2.26 | 1.16 | .40 | 1.33 | 3.06 | 2.80 | 2.88 | 2.94 | 2.73 | 3.18 |
| 25 | 2.84 | 3.19 | 2.24 | 1.12 | .38 | 1.45 | 3.06 | 2.81 | 2.83 | 3.17 | 2.70 | 3.22 |
| 26 | 2.77 | 3.12 | 2.21 | 1.08 | .38 | 1.58 | 3.04 | 2.81 | 2.83 | 3.20 | 2.74 | 3.23 |
| 27 | 2.72 | 3.11 | 2.19 | 1.04 | .38 | 1.73 | 3.02 | 2.80 | 2.92 | 3.14 | 2.72 | 3.21 |
| 28 | 2.69 | 3.08 | 2.16 | 1.00 | .37 | 1.89 | 2.96 | 2.81 | 2.93 | 3.16 | 2.69 | 3.21 |
| 29 | 2.61 | 3.09 | 2.13 | .97 | --- | 2.04 | 2.93 | 2.82 | 2.94 | 3.17 | 2.67 | 3.19 |
| 30 | 2.59 | 3.06 | 2.10 | .95 | --- | 2.18 | 2.92 | 2.82 | 2.89 | 3.11 | 2.65 | 3.20 |
| 31 | 2.56 | --- | 2.07 | .92 | --- | 2.33 | --- | 2.84 | --- | 3.06 | 2.64 | --- |
| MEAN | 2.81 | 3.03 | 2.51 | 1.51 | .61 | .94 | 3.00 | 2.80 | 2.84 | 2.95 | 2.79 | 2.96 |
| MAX | 3.05 | 3.30 | 3.12 | 2.04 | .92 | 2.33 | 3.16 | 2.89 | 2.94 | 3.20 | 3.06 | 3.23 |
| MIN | 2.56 | 2.61 | 2.07 | .92 | .37 | .36 | 2.44 | 2.73 | 2.74 | 2.82 | 2.64 | 2.53 |

CAL YR 1985 MEAN 2.47 MAX 3.30 MIN .83
WTR YR 1986 MEAN 2.40 MAX 3.30 MIN .36

## 04084255 LAKE WINNEBAGO NEAR STOCKBRIDGE, WI

LOCATION.--Lat 44°04'17", long 88°19'52", Stockbridge Indian Reservation, Calumet County, Hydrologic Unit 04030203, on east shore of Lake Winnebago, 300 ft south of County Highway E and 1.6 mi west of Stockbridge.

DRAINAGE AREA.--5,880 mi$^2$, at lake outlet at Menasha Dam. Area of Lake Winnebago, 215 mi$^2$.

PERIOD OF RECORD.--November 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 745.05 ft above mean tide of New York City (levels by U. S. Army Corps of Engineers).

REMARKS.--Records good. Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 1/4 in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Data-collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 3.73 ft Nov. 20, 1985, local condition due to seiche. Minimum observed, 0.30 ft Mar. 1, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.73 ft Nov. 20, local condition due to seiche; minimum, 0.30 ft Mar. 1.

### GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.77 | 2.59 | 3.09 | 2.02 | .90 | .34 | 2.48 | 3.00 | 2.77 | 2.85 | 3.09 | 2.64 |
| 2 | 2.68 | 2.82 | 3.13 | 2.00 | .87 | .35 | 2.59 | 2.88 | 2.74 | 2.88 | 3.08 | 2.63 |
| 3 | 2.65 | 2.86 | 3.02 | 1.99 | .84 | .36 | 2.67 | 2.86 | 2.77 | 2.86 | 3.04 | 2.63 |
| 4 | 2.71 | 2.84 | 2.95 | 1.97 | .84 | .37 | 2.76 | 2.88 | 2.74 | 2.90 | 2.99 | 2.70 |
| 5 | 2.84 | 2.83 | 2.90 | 1.95 | .85 | .38 | 2.86 | 2.83 | 2.70 | 2.89 | 2.94 | 2.69 |
| 6 | 2.83 | 2.84 | 2.85 | 1.92 | .81 | .39 | 2.96 | 2.81 | 2.73 | 2.87 | 2.86 | 2.62 |
| 7 | 2.77 | 2.88 | 2.79 | 1.88 | .78 | .40 | 3.03 | 2.77 | 2.76 | 2.88 | 2.85 | 2.59 |
| 8 | 2.80 | 2.85 | 2.75 | 1.83 | .75 | .41 | 3.08 | 2.69 | 2.77 | 2.84 | 2.87 | 2.62 |
| 9 | 2.79 | 2.74 | 2.70 | 1.79 | .72 | .43 | 3.12 | 2.69 | 2.71 | 2.86 | 2.84 | 2.54 |
| 10 | 2.81 | 2.77 | 2.67 | 1.76 | .68 | .48 | 3.14 | 2.69 | 2.74 | 2.83 | 2.86 | 2.70 |
| 11 | [illegible] | 2.88 | 2.63 | 1.71 | .65 | .54 | 3.13 | 2.70 | 2.79 | 2.73 | 2.83 | 3.19 |
| 12 | 2.88 | 2.95 | 2.59 | 1.69 | .63 | .54 | 3.09 | 2.72 | 2.92 | 2.81 | 2.78 | 3.24 |
| 13 | 2.97 | 2.98 | 2.55 | 1.64 | .59 | .57 | 3.06 | 2.71 | 2.92 | 2.95 | 2.76 | 3.17 |
| 14 | 2.99 | 3.05 | 2.51 | 1.61 | .58 | .58 | 3.00 | 2.71 | 2.89 | 2.88 | 2.75 | 3.07 |
| 15 | 3.07 | 3.02 | 2.48 | 1.57 | .55 | .60 | 3.01 | 2.71 | 2.86 | 2.86 | 2.78 | 3.01 |
| 16 | 3.06 | 3.15 | 2.44 | 1.53 | .54 | .62 | 3.05 | 2.75 | 2.87 | 2.89 | 2.77 | 3.00 |
| 17 | 3.01 | 3.19 | 2.41 | 1.49 | .51 | .65 | 3.12 | 2.73 | 2.81 | 2.92 | 2.78 | 2.98 |
| 18 | 2.99 | 3.21 | 2.37 | 1.44 | .49 | .76 | 3.14 | 2.77 | 2.80 | 2.91 | 2.77 | 2.97 |
| 19 | 2.97 | 3.29 | 2.34 | 1.39 | .47 | .92 | 3.19 | 2.71 | 2.82 | 3.00 | 2.77 | 2.95 |
| 20 | 2.94 | 3.47 | 2.32 | 1.33 | .45 | 1.00 | 3.15 | 2.74 | 2.83 | 2.99 | 2.77 | 2.98 |
| 21 | 2.93 | 3.28 | 2.29 | 1.28 | .44 | 1.04 | 3.10 | 2.77 | 2.85 | 2.95 | 2.74 | 2.99 |
| 22 | 2.91 | 3.27 | 2.28 | 1.24 | .42 | 1.09 | 3.14 | 2.75 | 2.90 | 2.97 | 2.74 | 3.16 |
| 23 | 2.88 | 3.27 | 2.26 | 1.19 | .40 | 1.18 | 3.12 | 2.78 | 2.91 | 2.97 | 2.76 | 3.21 |
| 24 | 2.91 | 3.24 | 2.25 | 1.14 | .38 | 1.28 | 3.07 | 2.79 | 2.85 | 2.99 | 2.73 | 3.17 |
| 25 | 2.85 | 3.15 | 2.22 | 1.11 | .36 | 1.39 | 3.02 | 2.78 | 2.86 | 3.17 | 2.71 | 3.20 |
| 26 | 2.80 | 3.14 | 2.20 | 1.07 | .37 | 1.57 | 3.04 | 2.75 | 2.86 | 3.17 | 2.69 | 3.24 |
| 27 | 2.73 | 3.11 | 2.18 | 1.03 | .36 | 1.74 | 3.01 | 2.77 | 2.95 | 3.18 | 2.70 | 3.23 |
| 28 | 2.65 | 3.10 | 2.15 | .99 | .35 | 1.89 | 3.02 | 2.80 | 2.94 | 3.18 | 2.71 | 3.22 |
| 29 | 2.59 | 3.08 | 2.12 | .96 | --- | 2.05 | 3.00 | 2.82 | 2.91 | 3.16 | 2.70 | 3.24 |
| 30 | 2.52 | 3.06 | 2.08 | .93 | --- | 2.21 | 2.95 | 2.85 | 2.84 | 3.13 | 2.67 | 3.22 |
| 31 | 2.47 | --- | 2.06 | .90 | --- | 2.34 | --- | 2.84 | --- | 3.11 | 2.65 | --- |
| MEAN | 2.83 | 3.03 | 2.50 | 1.50 | .59 | .92 | 3.00 | 2.78 | 2.83 | 2.95 | 2.81 | 2.96 |
| MAX | 3.07 | 3.47 | 3.13 | 2.02 | .90 | 2.34 | 3.19 | 3.00 | 2.95 | 3.18 | 3.09 | 3.24 |
| MIN | 2.47 | 2.59 | 2.06 | .90 | .35 | .34 | 2.48 | 2.69 | 2.70 | 2.73 | 2.65 | 2.54 |

CAL YR 1985 MEAN 2.47 MAX 3.47 MIN .80
WTR YR 1986 MEAN 2.40 MAX 3.47 MIN .34

## 04084500 FOX RIVER AT RAPIDE CROCHE DAM, NEAR WRIGHTSTOWN, WI

LOCATION.--Lat 44°19'03", long 88°11'50", in SE 1/4 sec.4, T.21 N., R.19 E., Outagamie County, Hydrologic Unit 04030204, at Rapide Croche Dam, 2.0 mi upstream from Wrightstown, and 18 mi upstream from mouth.

DRAINAGE AREA.--6,010 mi$^2$.

PERIOD OF RECORD.--March 1896 to September 1917 (monthly discharge only), October 1917 to current year.

REVISED RECORD.--WDR WI-80-1: Drainage area. WDR WI-81-1: 1980.

GAGE.--Recording headwater and tailwater gages and electric generation are read three times a day and used to compute the discharge records.

REMARKS.--Flow regulated by storage in Lake Winnebago (see sta. 04082500 and 04084255). Daily discharge determined from records of flow through turbines, head, gate openings, and lockages through navigation canal. Usually less than about 20 ft$^3$/s is diverted into basin from Wisconsin River at Portage Canal throughout the year.

COOPERATION.--Figures of daily discharge furnished by U.S. Army Corps of Engineers. Records reviewed by Geological Survey.

AVERAGE DISCHARGE.--90 years, 4,268 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 24,000 ft$^3$/s Apr. 18, 1952; minimum daily, 138 ft$^3$/s Aug. 2, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during year, 15,400 ft$^3$/s Sept. 30; minimum daily, 1,720 ft$^3$/s June 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4210 | 11100 | 9960 | 5580 | 5850 | 3540 | 11400 | 10300 | 2700 | 4620 | 9040 | 2280 |
| 2 | 4220 | 12200 | 11300 | 5850 | 6030 | 3310 | 11600 | 9490 | 2890 | 3230 | 9130 | 2400 |
| 3 | 4580 | 10600 | 11400 | 5200 | 5550 | 2710 | 12000 | 8300 | 2620 | 3820 | 8900 | 2740 |
| 4 | 5050 | 10300 | 10100 | 5900 | 5920 | 2560 | 12000 | 7510 | 2220 | 3920 | 7980 | 2760 |
| 5 | 5130 | 11100 | 10500 | 5220 | 5930 | 2410 | 13400 | 8160 | 1720 | 3900 | 7190 | 2640 |
| 6 | 4740 | 11400 | 9740 | 6640 | 5920 | 2700 | 13100 | 7340 | 1950 | 3590 | 5250 | 2390 |
| 7 | 4570 | 11300 | 10500 | 6930 | 5730 | 2560 | 13800 | 4220 | 1880 | 4070 | 4540 | 2500 |
| 8 | 4870 | 11400 | 10100 | 6910 | 5760 | 2250 | 14100 | 4390 | 1850 | 3390 | 4720 | 2350 |
| 9 | 4100 | 11100 | 11000 | 6470 | 5150 | 2250 | 13200 | 4410 | 1820 | 3610 | 4600 | 2620 |
| 10 | 4540 | 10500 | 10500 | 6950 | 5690 | 2600 | 14000 | 4640 | 1780 | 3690 | 4690 | 3830 |
| 11 | 4530 | 10700 | 10800 | 6560 | 5080 | 3300 | 14200 | 4470 | 2590 | 3700 | 4160 | 8320 |
| 12 | 4760 | 10700 | 8080 | 7070 | 4600 | 3500 | 14100 | 4470 | 3600 | 3570 | 3150 | 10100 |
| 13 | 4800 | 11700 | 10100 | 5780 | 4060 | 3500 | 13200 | 4540 | 5710 | 3810 | 2920 | 11700 |
| 14 | 4840 | 11800 | 8150 | 6820 | 4100 | 3650 | 14000 | 4000 | 5690 | 3690 | 3140 | 11000 |
| 15 | 5010 | 12200 | 9000 | 6720 | 4390 | 3610 | 14100 | 4060 | 5620 | 3880 | 2850 | 11800 |
| 16 | 6180 | 12300 | 8000 | 7280 | 4390 | 3740 | 12100 | 4090 | 5980 | 3770 | 3000 | 11700 |
| 17 | 7890 | 12900 | 8250 | 6880 | 4460 | 3790 | 11600 | 3800 | 4360 | 3800 | 2920 | 11300 |
| 18 | 7880 | 13200 | 7880 | 8090 | 3920 | 7470 | 12300 | 3700 | 4000 | 3710 | 2860 | 12000 |
| 19 | 7900 | 12400 | 7890 | 8720 | 3880 | 7640 | 12100 | 3640 | 4780 | 5360 | 2920 | 11600 |
| 20 | 7770 | 12600 | 7070 | 7940 | 3650 | 7390 | 11800 | 3700 | 4620 | 4420 | 2900 | 11900 |
| 21 | 7900 | 12400 | 7870 | 8550 | 3270 | 8020 | 10400 | 3820 | 4410 | 3230 | 2690 | 10900 |
| 22 | 10000 | 12400 | 7080 | 7300 | 3890 | 7240 | 11000 | 3840 | 4580 | 4420 | 2790 | 14000 |
| 23 | 9260 | 12800 | 7850 | 7830 | 3750 | 7740 | 12000 | 3860 | 4370 | 3970 | 2740 | 13900 |
| 24 | 11200 | 11100 | 6720 | 6680 | 4010 | 9400 | 11400 | 3880 | 4030 | 4340 | 2740 | 14300 |
| 25 | 11200 | 12700 | 6790 | 7660 | 3700 | 10100 | 11200 | 3890 | 4080 | 7560 | 2920 | 15100 |
| 26 | 11200 | 12700 | 6450 | 6730 | 3580 | 10400 | 11700 | 3780 | 3960 | 7680 | 2800 | 15100 |
| 27 | 10700 | 10100 | 7870 | 6220 | 3970 | 9910 | 11800 | 3020 | 4940 | 7180 | 2460 | 14800 |
| 28 | 10500 | 10800 | 7240 | 6430 | 4160 | 9620 | 11800 | 2740 | 5250 | 6450 | 2660 | 14300 |
| 29 | 10600 | 10000 | 6240 | 5840 | --- | 9900 | 11300 | 2490 | 5160 | 7410 | 2760 | 15200 |
| 30 | 9640 | 10100 | 6260 | 6040 | --- | 10100 | 11300 | 2650 | 4920 | 9260 | 2440 | 15400 |
| 31 | 9200 | --- | 5960 | 5900 | --- | 11700 | --- | 2810 | --- | 9510 | 2450 | --- |
| TOTAL | 218970 | 346600 | 266650 | 208690 | 130390 | 178610 | 372000 | 146010 | 114080 | 148560 | 126310 | 280930 |
| MEAN | 7064 | 11550 | 8602 | 6732 | 4657 | 5762 | 12400 | 4710 | 3803 | 4792 | 4075 | 9364 |
| MAX | 11200 | 13200 | 11400 | 8720 | 6030 | 11700 | 14200 | 10300 | 5980 | 9510 | 9130 | 15400 |
| MIN | 4100 | 10000 | 5960 | 5200 | 3270 | 2250 | 10400 | 2490 | 1720 | 3230 | 2440 | 2280 |

CAL YR 1985 TOTAL 2489750 MEAN 6821 MAX 15400 MIN 1440
WTR YR 1986 TOTAL 2537800 MEAN 6953 MAX 15400 MIN 1720

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## 04085000 FOX RIVER AT WRIGHTSTOWN, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°19'36", long 88°09'54", in NE 1/4 NW 1/4 sec.2, T.21 N., R.19 E., Brown County, Hydrologic Unit 04030204, at bridge on State Highway 96 at Wrightstown.

DRAINAGE AREA.--6,050 mi², approximately.

PERIOD OF RECORD.--Water years 1970, 1974 to current year.

REMARKS.--Records of discharge used are for 04084500 Fox River at Rapide Croche Dam near Wrightstown.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | BARO-METRIC PRES-SURE (MM OF HG) (00025) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 0800 | 11800 | 365 | 8.20 | 4.0 | 9.0 | 13.0 | 754 | 100 |
| MAR , 1986<br>26... | 1530 | 10400 | 400 | 7.50 | 5.5 | 25 | 12.2 | 750 | 98 |
| MAY<br>28... | 0830 | 2740 | 360 | 8.20 | 19.5 | 5.0 | 9.1 | 749 | 101 |
| JUL<br>16... | 1010 | 3770 | 380 | 8.70 | 22.5 | 6.2 | 7.9 | 749 | 93 |

| DATE | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM AD-SORP-TION RATIO (00931) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 5300 | 3700 | 170 | 22 | 35 | 21 | 8.4 | 9 | .3 | 3.0 |
| MAR , 1986<br>26... | 580 | 580 | 190 | 27 | 41 | 21 | 8.1 | 8 | .3 | 3.0 |
| MAY<br>28... | 43 | 51 | 160 | 0 | 35 | 18 | 9.8 | 11 | .3 | 2.4 |
| JUL<br>16... | 200 | 1100 | 180 | 6 | 39 | 19 | 9.5 | 10 | .3 | 2.7 |

| DATE | BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440) | CAR-BONATE IT-FLD (MG/L AS CO3) (99445) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 185 | -- | 149 | 1.9 | 29 | 19 | .10 | 3.5 | 200 |
| MAR , 1986<br>26... | 198 | -- | 159 | 9.9 | 18 | 15 | .20 | 9.1 | 233 |
| MAY<br>28... | 254 | -- | 204 | 2.5 | 22 | 14 | .20 | 1.6 | 198 |
| JUL<br>16... | 177 | 15 | 154 | .6 | 22 | 15 | .20 | 4.6 | 210 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 210 | .27 | 6370 | <.10 | .060 | 1.4 | .120 | .070 | .050 |
| MAR , 1986<br>26... | 220 | .32 | 6540 | .87 | .260 | 1.3 | .120 | .060 | .050 |
| MAY<br>28... | 230 | .27 | 1460 | .24 | .150 | 1.0 | .080 | .050 | .030 |
| JUL<br>16... | 230 | .29 | 2140 | <.10 | .040 | 1.9 | .140 | .020 | <.010 |

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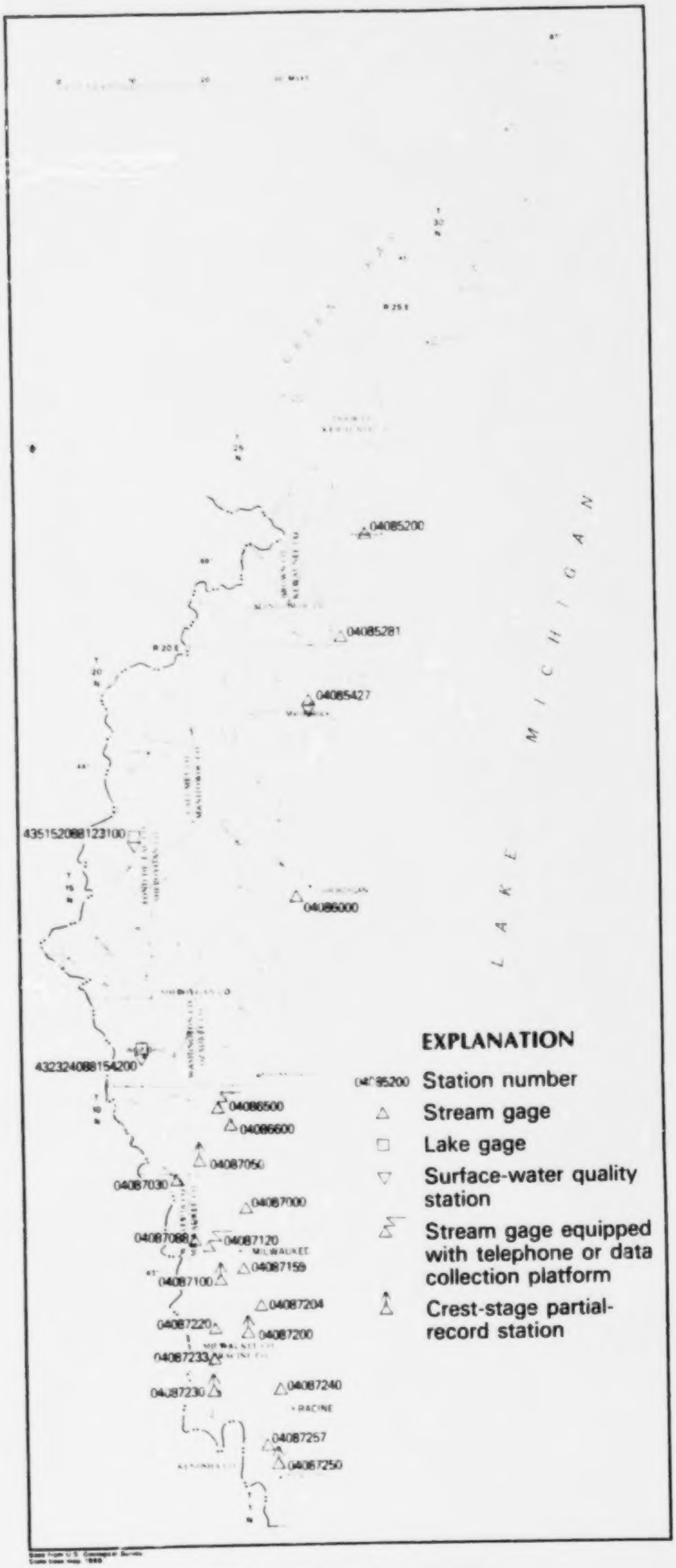
## 04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 0800 | 11800 | 50 | <1 | 24 | <.5 | <1 | <1 | <3 | 3 |
| MAR , 1986<br>26... | 1530 | 10400 | 20 | <1 | 24 | <.5 | <1 | <1 | <3 | 3 |
| JUL<br>16... | 1010 | 3770 | 20 | 1 | 26 | <.5 | <1 | <1 | <3 | 1 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 9 | 2 | <4 | 4 | <.1 | <10 | 2 | <1 | 110 | <6 | 9 |
| MAR , 1986<br>26... | 59 | <1 | 7 | 100 | <.1 | <10 | <1 | <1 | 100 | <6 | 15 |
| JUL<br>16... | 7 | <5 | 7 | 4 | <.1 | <10 | 1 | <1 | 170 | <6 | 38 |

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|
| NOV , 1985<br>14... | 0800 | 11800 | 365 | 4.0 | 16 | 510 | 87 |
| MAR , 1986<br>26... | 1530 | 10400 | 400 | 5.5 | 80 | 2250 | 98 |
| MAY<br>28... | 0830 | 2740 | 360 | 19.5 | 14 | 104 | 89 |
| JUL<br>16... | 1010 | 3770 | 380 | 22.5 | 45 | 458 | 90 |



LAKE MICHIGAN BASIN

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## 04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI

LOCATION.--Lat 44°27'30", long 87°33'23", in SW 1/4 sec.14, T.23 N., R.24 E., Kewaunee County, Hydrologic Unit 04030102, on left bank just downstream from bridge on County Trunk Highway F, 2.3 mi west of Kewaunee, and about 7.0 mi upstream from mouth.

DRAINAGE AREA.--127 mi$^2$.

PERIOD OF RECORD.--Annual maximum, water years 1958-65, and occasional low-flow measurements, water years 1963-64. September 1964 to current year. No winter records for years 1965 and 1966.

REVISED RECORDS.--WDR WI-79-1: Drainage area. WDR WI-85-1: 1962(M), 1965(M), 1967-69(M), 1971(M), 1973-74(M), 1976(M), 1978(M), 1980-82(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 579.64 ft above National Geodetic Vertical Datum of 1929 (Wisconsin State Highway Commission benchmark). Apr. 3, 1957, to Sept. 2, 1964, crest-stage gage only at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair.

AVERAGE DISCHARGE.--20 years, 88.6 ft$^3$/s, 9.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft$^3$/s Mar. 30, 1960, gage height, 16.03 ft (backwater from ice); minimum recorded, 4.0 ft$^3$/s Nov. 2, 1977, gage height, 8.06 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 1630 | 4,680 | 13.76 | Sept. 23 | 0045 | 2,240 | 12.68 |
| Nov. 17 | 0815 | 1,440 | 11.98 | Sept. 26 | 1330 | 831 | 11.18 |
| Mar. 26 | 0715 | *5,550 | *14.05 | Sept. 30 | 0245 | 1,610 | 12.11 |
| Sept. 12 | 0415 | 1,290 | 11.80 | | | | |

Minimum discharge, 18 ft$^3$/s Sept. 7, 9, gage height, 8.50 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 24 to Mar. 24.)

| Oct. 1 Mar. 25 | | | | Mar. 26 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 8.6 | 36 | 11.0 | 722 | 8.5 | 18 | 10.0 | 263 |
| 9.0 | 85 | 12.0 | 1,460 | 8.7 | 31 | 11.0 | 701 |
| 9.5 | 175 | 13.0 | 2,800 | 8.9 | 48 | 12.0 | 1,460 |
| 10.0 | 307 | | | 9.1 | 71 | 13.0 | 2,680 |
| | | | | 9.5 | 137 | 14.0 | 5,390 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 72 | 141 | 84 | 62 | 48 | 43 | 378 | 75 | 30 | 35 | 35 | 21 |
| 2 | 70 | 2720 | 82 | 60 | 47 | 43 | 314 | 67 | 29 | 32 | 35 | 20 |
| 3 | 59 | 2250 | 80 | 60 | 46 | 43 | 248 | 61 | 28 | 29 | 40 | 21 |
| 4 | 84 | 684 | 78 | 60 | 47 | 45 | 247 | 59 | 28 | 28 | 34 | 23 |
| 5 | 344 | 344 | 76 | 58 | 49 | 46 | 252 | 57 | 27 | 27 | 29 | 21 |
| 6 | 398 | 236 | 76 | 58 | 49 | 45 | 350 | 55 | 27 | 26 | 26 | 20 |
| 7 | 240 | 267 | 74 | 56 | 48 | 44 | 286 | 51 | 27 | 24 | 26 | 19 |
| 8 | 146 | 242 | 74 | 56 | 47 | 43 | 210 | 49 | 27 | 23 | 29 | 19 |
| 9 | 105 | 195 | 74 | 56 | 46 | 43 | 165 | 47 | 25 | 23 | 31 | 19 |
| 10 | 84 | 168 | 72 | 56 | 45 | 44 | 139 | 46 | 25 | 22 | 30 | 208 |
| 11 | 73 | 168 | 72 | 58 | 45 | 48 | 124 | 45 | 32 | 22 | 40 | 805 |
| 12 | 143 | 212 | 72 | 58 | 44 | 54 | 112 | 45 | 45 | 29 | 36 | 1090 |
| 13 | 314 | 362 | 70 | 56 | 43 | 62 | 104 | 45 | 39 | 29 | 30 | 445 |
| 14 | 240 | 522 | 70 | 56 | 42 | 70 | 115 | 44 | 33 | 26 | 27 | 202 |
| 15 | 167 | 504 | 70 | 54 | 42 | 80 | 267 | 45 | 30 | 29 | 60 | 259 |
| 16 | 118 | 598 | 70 | 54 | 41 | 100 | 377 | 61 | 29 | 50 | 89 | 414 |
| 17 | 91 | 1240 | 70 | 56 | 41 | 130 | 302 | 62 | 27 | 46 | 67 | 292 |
| 18 | 80 | 626 | 70 | 56 | 41 | 190 | 193 | 92 | 25 | 40 | 111 | 189 |
| 19 | 78 | 581 | 70 | 58 | 41 | 270 | 145 | 75 | 31 | 46 | 98 | 174 |
| 20 | 74 | 412 | 70 | 60 | 43 | 400 | 121 | 59 | 43 | 48 | 57 | 409 |
| 21 | 67 | 232 | 68 | 58 | 44 | 720 | 108 | 50 | 33 | 39 | 41 | 482 |
| 22 | 63 | 182 | 66 | 56 | 44 | 560 | 96 | 47 | 32 | 34 | 34 | 1520 |
| 23 | 60 | 149 | 66 | 56 | 44 | 450 | 89 | 44 | 30 | 28 | 30 | 1660 |
| 24 | 61 | 130 | 66 | 56 | 43 | 700 | 83 | 42 | 35 | 28 | 28 | 621 |
| 25 | 61 | 110 | 66 | 54 | 43 | 1580 | 78 | 41 | 31 | 49 | 26 | 469 |
| 26 | 58 | 100 | 66 | 54 | 43 | 4740 | 89 | 38 | 32 | 58 | 26 | 757 |
| 27 | 53 | 98 | 64 | 54 | 43 | 3020 | 88 | 36 | 87 | 44 | 30 | 747 |
| 28 | 49 | 94 | 64 | 52 | 43 | 1350 | 78 | 35 | 103 | 104 | 28 | 472 |
| 29 | 46 | 92 | 64 | 50 | --- | 1300 | 72 | 33 | 60 | 100 | 25 | 918 |
| 30 | 45 | 88 | 62 | 50 | --- | 819 | 73 | 31 | 43 | 60 | 24 | 1300 |
| 31 | 44 | --- | 62 | 49 | --- | 503 | --- | 30 | --- | 45 | 23 | --- |
| TOTAL | 3587 | 13747 | 2188 | 1737 | 1242 | 17585 | 5303 | 1567 | 1098 | 1223 | 1245 | 13616 |
| MEAN | 116 | 458 | 70.6 | 56.0 | 44.4 | 567 | 177 | 50.5 | 36.6 | 39.5 | 40.2 | 454 |
| MAX | 398 | 2720 | 84 | 62 | 49 | 4740 | 378 | 92 | 103 | 104 | 111 | 1660 |
| MIN | 44 | 88 | 62 | 49 | 41 | 43 | 72 | 30 | 25 | 22 | 23 | 19 |
| CFSM | .91 | 3.61 | .56 | .44 | .35 | 4.47 | 1.39 | .40 | .29 | .31 | .32 | 3.58 |
| IN. | 1.05 | 4.03 | .64 | .51 | .36 | 5.15 | 1.55 | .46 | .32 | .36 | .36 | 3.99 |

CAL YR 1985 TOTAL 56628 MEAN 155 MAX 2720 MIN 20 CFSM 1.22 IN 16.59
WTR YR 1986 TOTAL 64138 MEAN 176 MAX 4740 MIN 19 CFSM 1.39 IN 18.79

## 04085281 EAST TWIN RIVER AT MISHICOT, WI

LOCATION.--Lat 44°14'16", long 87°38'11", in NW 1/4 NW 1/4 sec.4, T.20 N., R.24 E., Manitowoc County, Hydrologic Unit 04030101, on right bank 500 ft downstream from bridge on State Highway 147, at Mishicot, 0.8 mi upstream from Johnson Creek, and 9.8 mi upstream from mouth.

DRAINAGE AREA.--110 mi$^2$.

PERIOD OF RECORD.--July 1972 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Occasional regulation caused by recreation dam 0.3 mi upstream.

AVERAGE DISCHARGE.--14 years, 84.3 ft$^3$/s, 10.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft$^3$/s Mar. 31, 1979, gage height, 13.75 ft; minimum, 1.7 ft$^3$/s July 20, 1979, gage height, 3.69 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 13 | 0415 | 539 | 7.70 | Sept. 11 | 2100 | 1,740 | 10.88 |
| Nov. 3 | 0215 | 1,310 | 10.58 | Sept. 23 | 0200 | 613 | 8.01 |
| Nov. 17 | 0545 | 695 | 8.38 | Sept. 25 | 1015 | 745 | 8.50 |
| Mar. 27 | 0500 | *2,370 | *11.95 | | | | |

Minimum discharge, 17.0 ft$^3$/s Sept. 3, 9, gage height, 4.23 and 4.24 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 25 to Mar. 24.)

Oct. 1 to Mar. 25 (1730)

| | |
|---|---|
| 4.5 | 34 |
| 5.0 | 85 |
| 6.0 | 220 |
| 7.0 | 394 |
| 8.0 | 606 |
| 9.0 | 850 |

Mar. 25 (1745) to Sept. 30

| | | | |
|---|---|---|---|
| 4.2 | 15 | 7.0 | 392 |
| 4.3 | 21 | 8.0 | 610 |
| 4.5 | 36 | 9.0 | 905 |
| 5.0 | 85 | 10.0 | 1,300 |
| 6.0 | 222 | 11.0 | 1,800 |
| | | 12.0 | 2,410 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 83 | 160 | 74 | 60 | 54 | 43 | 452 | 74 | 27 | 34 | 64 | 18 |
| 2 | 77 | 975 | 66 | 60 | 54 | 42 | 346 | 69 | 26 | 30 | 57 | 18 |
| 3 | 67 | 1200 | 80 | 60 | 54 | 42 | 277 | 62 | 25 | 27 | 49 | 21 |
| 4 | 91 | 884 | 76 | 60 | 52 | 44 | 272 | 59 | 25 | 26 | 38 | 30 |
| 5 | 301 | 521 | 74 | 60 | 56 | 46 | 277 | 55 | 26 | 24 | 32 | 26 |
| 6 | 251 | 314 | 72 | 58 | 54 | 45 | 327 | 53 | 26 | 22 | 28 | 22 |
| 7 | 208 | 281 | 70 | 58 | 52 | 44 | 304 | 48 | 24 | 20 | 26 | 20 |
| 8 | 153 | 244 | 70 | 56 | 50 | 43 | 244 | 43 | 23 | 19 | 27 | 18 |
| 9 | 115 | 226 | 70 | 56 | 50 | 42 | 186 | 42 | 22 | 19 | 33 | 17 |
| 10 | 97 | 251 | 70 | 56 | 49 | 43 | 148 | 41 | 22 | 18 | 30 | 191 |
| 11 | 92 | 242 | 70 | 58 | 48 | 45 | 126 | 40 | 30 | 18 | 29 | 1410 |
| 12 | 222 | 246 | 70 | 58 | 48 | 52 | 112 | 40 | 74 | 19 | 30 | 1310 |
| 13 | 487 | 379 | 70 | 56 | 47 | 58 | 103 | 40 | 74 | 20 | 26 | 768 |
| 14 | 342 | 419 | 70 | 54 | 46 | 70 | 105 | 40 | 45 | 20 | 24 | 404 |
| 15 | 257 | 382 | 70 | 54 | 45 | 90 | 198 | 41 | 39 | 20 | 23 | 271 |
| 16 | 186 | 470 | 70 | 54 | 44 | 130 | 252 | 76 | 35 | 29 | 22 | 236 |
| 17 | 147 | 664 | 70 | 54 | 44 | 170 | 241 | 83 | 30 | 31 | 26 | 194 |
| 18 | 120 | 619 | 70 | 56 | 43 | 210 | 187 | 98 | 27 | 27 | 53 | 162 |
| 19 | 112 | 602 | 70 | 56 | 44 | 310 | 142 | 93 | 29 | 229 | 66 | 172 |
| 20 | 104 | 465 | 68 | 58 | 45 | 430 | 117 | 74 | 42 | 175 | 47 | 396 |
| 21 | 95 | 304 | 68 | 62 | 45 | 600 | 99 | 62 | 40 | 90 | 32 | 360 |
| 22 | 87 | 218 | 68 | 64 | 45 | 640 | 95 | 55 | 33 | 52 | 25 | 535 |
| 23 | 82 | 167 | 66 | 64 | 44 | 680 | 87 | 50 | 30 | 38 | 23 | 551 |
| 24 | 89 | 131 | 66 | 62 | 44 | 760 | 81 | 47 | 33 | 33 | 21 | 475 |
| 25 | 87 | 120 | 66 | 62 | 44 | 1230 | 76 | 42 | 32 | 132 | 19 | 616 |
| 26 | 80 | 110 | 66 | 60 | 44 | 1990 | 85 | 40 | 30 | 168 | 19 | 581 |
| 27 | 71 | 100 | 64 | 58 | 44 | 2010 | 88 | 36 | 66 | 110 | 21 | 518 |
| 28 | 65 | 94 | 64 | 56 | 44 | 1200 | 82 | 35 | 97 | 68 | 22 | 414 |
| 29 | 62 | 88 | 62 | 56 | --- | 961 | 75 | 33 | 69 | 50 | 21 | 331 |
| 30 | 59 | 82 | 62 | 56 | --- | 818 | 73 | 30 | 43 | 40 | 19 | 267 |
| 31 | 57 | --- | 60 | 56 | --- | 607 | --- | 28 | --- | 35 | 19 | --- |
| TOTAL | 4346 | 10958 | 2132 | 1798 | 1333 | 13495 | 5257 | 1629 | 1148 | 1643 | 971 | 10352 |
| MEAN | 140 | 365 | 68.8 | 58.0 | 47.6 | 435 | 175 | 52.5 | 38.3 | 53.0 | 31.3 | 345 |
| MAX | 487 | 1200 | 80 | 64 | 56 | 2010 | 452 | 98 | 97 | 229 | 66 | 1410 |
| MIN | 57 | 82 | 60 | 54 | 43 | 42 | 73 | 28 | 22 | 18 | 19 | 17 |
| CFSM | 1.27 | 3.32 | .63 | .53 | .43 | 3.96 | 1.59 | .48 | .35 | .48 | .29 | 3.14 |
| IN. | 1.47 | 3.71 | .72 | .61 | .45 | 4.56 | 1.78 | .55 | .39 | .56 | .33 | 3.50 |

CAL YR 1985 TOTAL 52259 MEAN 143 MAX 1200 MIN 12 CFSM 1.30 IN 17.67
WTR YR 1986 TOTAL 55062 MEAN 151 MAX 2010 MIN 17 CFSM 1.37 IN 18.62

## 04085427 MANITOWOC RIVER AT MANITOWOC, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°06'26", long 87°42'55", in NE 1/4 NW 1/4 sec.23, T.19 N., R.23 E., Manitowoc County, Hydrologic Unit 04030101, on right bank 300 ft upstream from bridge on County Trunk Highway JJ, just west of the Manitowoc city limits and 6.6 mi upstream from mouth.

DRAINAGE AREA.--526 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1972 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 610.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 26, 27, and ice period listed in rating table below. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--14 years, 365 ft$^3$/s, 9.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft$^3$/s Mar. 31, 1979, gage height, 13.24 ft from floodmarks; maximum gage height, 13.30 ft Mar. 25, 1986, from floodmarks; minimum discharge, 10 ft$^3$/s Nov. 7, 1976, gage height, 3.69 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 3 | 1400 | 2,050 | 8.72 | July 25 | 1800 | 893 | 6.82 |
| Nov. 16 | 1600 | 2,190 | 8.91 | Sept. 11 | 0515 | 4,580 | 11.08 |
| Mar. 25 | ---- | ice jam | *13.30 | Sept. 25 | 1630 | 3,280 | 9.95 |
| Mar. 26 | 1630 | *5,900 | 11.95 | | | | |

Minimum discharge, 55 ft$^3$/s June 4, gage height, 4.13 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 22 to Mar. 25.)

| | | | |
|---|---|---|---|
| 4.1 | 51 | 8.0 | 1,570 |
| 4.5 | 114 | 9.0 | 2,380 |
| 5.0 | 224 | 10.0 | 3,330 |
| 6.0 | 540 | 11.0 | 4,480 |
| 7.0 | 981 | 12.0 | 5,820 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 181 | 513 | 600 | 250 | 180 | 150 | 3080 | 423 | 78 | 422 | 715 | 101 |
| 2 | 183 | 1760 | 620 | 240 | 180 | 150 | 2850 | 384 | 66 | 409 | 724 | 97 |
| 3 | 166 | 1880 | 580 | 230 | 180 | 150 | 2580 | 327 | 62 | 388 | 693 | 105 |
| 4 | 199 | 1690 | 560 | 230 | 190 | 150 | 2470 | 286 | 87 | 359 | 661 | 102 |
| 5 | 350 | 1380 | 520 | 220 | 210 | 150 | 2390 | 259 | 135 | 328 | 630 | 98 |
| 6 | 384 | 1330 | 500 | 220 | 200 | 160 | 2370 | 219 | 115 | 287 | 598 | 96 |
| 7 | 426 | 1360 | 480 | 210 | 180 | 160 | 2250 | 182 | 105 | 246 | 566 | 88 |
| 8 | 459 | 1350 | 470 | 210 | 170 | 160 | 2090 | 148 | 101 | 210 | 540 | 82 |
| 9 | 455 | 1310 | 450 | 200 | 170 | 160 | 1930 | 129 | 94 | 186 | 507 | 77 |
| 10 | 462 | 1250 | 440 | 200 | 160 | 170 | 1760 | 124 | 86 | 165 | 469 | 965 |
| 11 | 456 | 1240 | 420 | 190 | 160 | 200 | 1620 | 122 | 126 | 148 | 428 | 3450 |
| 12 | 584 | 1290 | 410 | 190 | 160 | 300 | 1480 | 122 | 315 | 130 | 380 | 2210 |
| 13 | 711 | 1520 | 400 | 190 | 160 | 400 | 1360 | 121 | 321 | 131 | 329 | 2270 |
| 14 | 646 | 1640 | 390 | 180 | 160 | 520 | 1260 | 118 | 345 | 136 | 275 | 2250 |
| 15 | 652 | 1560 | 380 | 180 | 160 | 620 | 1250 | 121 | 358 | 133 | 255 | 2170 |
| 16 | 662 | 1930 | 370 | 180 | 160 | 800 | 1220 | 162 | 359 | 131 | 225 | 2120 |
| 17 | 631 | 1950 | 360 | 180 | 160 | 1200 | 1170 | 173 | 342 | 127 | 269 | 2040 |
| 18 | 608 | 2060 | 360 | 180 | 160 | 1800 | 1100 | 199 | 300 | 128 | 289 | 2040 |
| 19 | 603 | 2030 | 340 | 180 | 150 | 2600 | 1030 | 201 | 293 | 174 | 258 | 2160 |
| 20 | 604 | 1910 | 330 | 190 | 150 | 2500 | 981 | 192 | 293 | 176 | 231 | 2440 |
| 21 | 591 | 1630 | 320 | 190 | 160 | 2500 | 910 | 191 | 284 | 185 | 209 | 2310 |
| 22 | 577 | 1400 | 320 | 200 | 160 | 3300 | 857 | 176 | 282 | 187 | 189 | 2900 |
| 23 | 558 | 1200 | 310 | 200 | 160 | 4200 | 789 | 157 | 272 | 175 | 174 | 2680 |
| 24 | 560 | 1100 | 300 | 200 | 160 | 5600 | 717 | 149 | 259 | 177 | 160 | 2560 |
| 25 | 558 | 960 | 290 | 200 | 150 | 5400 | 661 | 136 | 240 | 752 | 141 | 2940 |
| 26 | 533 | 880 | 280 | 190 | 150 | 5600 | 634 | 124 | 243 | 757 | 133 | 2840 |
| 27 | 505 | 800 | 280 | 190 | 150 | 5000 | 587 | 112 | 369 | 709 | 128 | 2660 |
| 28 | 477 | 740 | 270 | 190 | 150 | 4140 | 539 | 105 | 425 | 721 | 123 | 2550 |
| 29 | 441 | 700 | 260 | 190 | --- | 3860 | 505 | 101 | 438 | 732 | 123 | 2490 |
| 30 | 396 | 640 | 260 | 190 | --- | 3610 | 469 | 96 | 436 | 724 | 116 | 2440 |
| 31 | 357 | --- | 250 | 180 | --- | 3310 | --- | 91 | --- | 707 | 109 | --- |
| TOTAL | 14975 | 41003 | 12120 | 6170 | 4640 | 59020 | 42909 | 5450 | 7229 | 10240 | 10647 | 51331 |
| MEAN | 483 | 1367 | 391 | 199 | 166 | 1904 | 1430 | 176 | 241 | 330 | 343 | 1711 |
| MAX | 711 | 2060 | 620 | 250 | 210 | 5600 | 3080 | 423 | 438 | 757 | 724 | 3450 |
| MIN | 166 | 513 | 250 | 180 | 150 | 150 | 469 | 91 | 62 | 127 | 109 | 77 |
| CFSM | .92 | 2.60 | .74 | .38 | .32 | 3.62 | 2.72 | .34 | .46 | .63 | .65 | 3.25 |
| IN. | 1.06 | 2.90 | .86 | .44 | .33 | 4.17 | 3.03 | .39 | .51 | .72 | .75 | 3.63 |

CAL YR 1985 TOTAL 204819 MEAN 561 MAX 2870 MIN 30 CFSM 1.07 IN 14.49
WTR YR 1986 TOTAL 265734 MEAN 728 MAX 5600 MIN 62 CFSM 1.38 IN 18.79

## 04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1979 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | |
| 13... | 1400 | 1520 | 490 | 8.00 | 2.0 | 4.0 | 13.4 | -- | -- |
| MAR | | | | | | | | | |
| 26... | 1130 | 5610 | 310 | 7.40 | 3.0 | 25 | 12.5 | 744 | 95 |
| MAY | | | | | | | | | |
| 28... | 1215 | 107 | 730 | 8.50 | 21.0 | 5.5 | 14.6 | 749 | 167 |
| JUL | | | | | | | | | |
| 16... | 1410 | 129 | 700 | 8.60 | 22.0 | 28 | 14.0 | 749 | 163 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | |
| 13... | 3200 | 7500 | 250 | 61 | 55 | 28 | 7.8 | 6 | .2 | 6.5 |
| MAR , 1986 | | | | | | | | | | |
| 26... | -- | 310 | 150 | 17 | 34 | 17 | 4.9 | 6 | .2 | 4.3 |
| MAY | | | | | | | | | | |
| 28... | 34 | K18 | 370 | 0 | 77 | 44 | 14 | 7 | .3 | 2.8 |
| JUL | | | | | | | | | | |
| 16... | 150 | 340 | 350 | 18 | 74 | 39 | 15 | 9 | .4 | 3.5 |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | |
| 13... | 234 | -- | 188 | 3.7 | 29 | 21 | <.10 | 10 | 286 |
| MAR , 1986 | | | | | | | | | |
| 26... | 168 | -- | 135 | 11 | 18 | 11 | .10 | 5.7 | 186 |
| MAY | | | | | | | | | |
| 28... | 390 | 46 | 358 | 2.0 | -- | -- | .10 | 1.4 | -- |
| JUL | | | | | | | | | |
| 16... | 339 | 30 | 296 | 1.4 | 34 | 30 | .10 | 11 | 427 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | |
| 13... | 270 | .39 | 1170 | .98 | .290 | 1.6 | .210 | .160 | .120 |
| MAR , 1986 | | | | | | | | | |
| 26... | 180 | .25 | 2820 | 1.3 | .510 | 1.7 | .270 | .110 | .090 |
| MAY | | | | | | | | | |
| 28... | -- | -- | -- | .43 | .040 | 1.4 | .120 | .050 | .030 |
| JUL | | | | | | | | | |
| 16... | 440 | .58 | 149 | .45 | .050 | 2.2 | .250 | .140 | .110 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | |
| 13... | 1400 | 1520 | 20 | <1 | 25 | <.5 | <1 | <1 | <3 | 5 |
| MAR , 1986 | | | | | | | | | | |
| 26... | 1130 | 5610 | 20 | <1 | 18 | <.5 | <1 | <1 | <3 | 3 |
| JUL | | | | | | | | | | |
| 16... | 1410 | 129 | <10 | 1 | 36 | <.5 | <1 | <1 | <3 | 5 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | | |
| 13... | 110 | 5 | <4 | 8 | <.1 | <10 | 2 | <1 | 96 | <6 | 10 |
| MAR , 1986 | | | | | | | | | | | |
| 26... | 110 | <1 | 5 | 34 | <.1 | <10 | 2 | <1 | 55 | <6 | 52 |
| JUL | | | | | | | | | | | |
| 16... | 31 | <5 | 8 | 17 | <.1 | <10 | 5 | <1 | 260 | <6 | 41 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | |
| 13... | 1400 | 1520 | 490 | 2.0 | 42 | 172 | 89 |
| 19... | 0745 | 1970 | 420 | 5.5 | -- | -- | -- |
| JAN , 1986 | | | | | | | |
| 22... | 1705 | 195 | 830 | 0.0 | -- | -- | -- |
| FEB | | | | | | | |
| 22... | 0900 | 155 | 520 | 0.0 | -- | -- | -- |
| MAR | | | | | | | |
| 26... | 1130 | 5610 | 310 | 3.0 | 117 | 1770 | 85 |
| 26... | 1700 | 5900 | 330 | 4.0 | -- | -- | -- |
| 28... | 0830 | 4410 | 320 | 3.5 | -- | -- | -- |
| MAY | | | | | | | |
| 28... | 1215 | 107 | 730 | 21.0 | 41 | 12 | 87 |
| JUN | | | | | | | |
| 05... | 0820 | 128 | 595 | 16.0 | -- | -- | -- |
| JUL | | | | | | | |
| 16... | 1410 | 129 | 700 | 27.0 | 87 | 30 | 100 |
| SEP | | | | | | | |
| 09... | 1320 | 72.8 | 690 | 16.5 | -- | -- | -- |

## 435152088123100 WOLF LAKE NEAR MT. CALVARY, WI

LOCATION.--Lat 43°51'52", long 88°12'31", in SW 1/4 SE 1/4 Sec.10, T.16 N., R.19 E., Fond du Lac County, Hydrologic Unit 04030101, 3.2 miles northeast of Mt. Calvary.

DRAINAGE AREA.--3.43 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--November 17, 1983 to current year.

GAGE.--Staff gage read on west side of lake by William Krupp.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 6.81 ft Sept. 15, 1986; minimum observed, 4.42 ft July 24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 6.81 ft, Sept. 15; minimum observed, 4.84 ft, Sept. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 5.77 | 5.16 | 5.15 | 5.83 | 5.23 | 4.89 |
| 2 | | | | | | | 5.71 | 5.14 | 5.14 | 5.80 | 5.20 | 4.88 |
| 3 | | | | | | | 5.66 | 5.13 | 5.13 | 5.77 | 5.20 | 4.94 |
| 4 | | | | | | | 5.60 | 5.13 | 5.25 | 5.74 | 5.18 | 4.91 |
| 5 | | | | | | | 5.56 | 5.12 | 5.29 | 5.70 | 5.19 | 4.89 |
| 6 | | | | | | | 5.53 | 5.12 | 5.31 | 5.67 | 5.19 | 4.88 |
| 7 | | | | | | | 5.50 | 5.11 | 5.28 | 5.60 | 5.15 | 4.86 |
| 8 | | | | | | | 5.46 | 5.11 | 5.27 | 5.57 | 5.14 | 4.85 |
| 9 | | | | | | | 5.42 | 5.11 | 5.25 | 5.54 | 5.13 | 4.84 |
| 10 | | | | | | | 5.39 | 5.11 | 5.28 | 5.54 | 5.10 | 5.02 |
| 11 | | | | | | | 5.38 | 5.10 | 5.54 | 5.47 | 5.13 | 6.25 |
| 12 | | | | | | | 5.36 | 5.14 | 5.78 | 5.44 | 5.11 | 6.56 |
| 13 | | | | | | | 5.32 | 5.10 | 6.01 | 5.47 | 5.09 | 6.69 |
| 14 | | | | | | | 5.40 | 5.08 | 6.12 | 5.43 | 5.06 | 6.80 |
| 15 | | | | | | | 5.38 | 5.31 | 6.00 | 5.40 | 5.08 | 6.81 |
| 16 | | | | | | | 5.34 | 5.40 | 5.98 | 5.40 | 5.06 | 6.80 |
| 17 | | | | | | | 5.31 | 5.38 | 5.90 | 5.37 | 5.05 | 6.72 |
| 18 | | | | | | | 5.28 | 5.36 | 5.82 | 5.34 | 5.12 | 6.64 |
| 19 | | | | | | | 5.26 | 5.33 | 5.78 | 5.32 | 5.09 | 6.56 |
| 20 | | | | | | | 5.22 | 5.30 | 5.79 | 5.36 | 5.06 | 6.50 |
| 21 | | | | | | | 5.20 | 5.27 | 5.77 | 5.33 | 5.04 | 6.48 |
| 22 | | | | | | | 5.18 | 5.25 | 5.75 | 5.31 | 5.01 | 6.42 |
| 23 | | | | | | | 5.16 | 5.23 | 5.72 | 5.28 | 4.99 | 6.42 |
| 24 | | | | | | | 5.14 | 5.23 | 5.70 | 5.26 | 4.97 | 6.40 |
| 25 | | | | | | | 5.13 | 5.18 | 5.64 | 5.30 | 4.95 | 6.44 |
| 26 | | | | | | | 5.11 | 5.20 | 5.61 | 5.28 | 5.00 | 6.42 |
| 27 | | | | | | | 5.14 | 5.22 | 5.86 | 5.30 | 4.97 | 6.40 |
| 28 | | | | | | | 5.17 | 5.24 | 5.90 | 5.29 | 4.94 | 6.38 |
| 29 | | | | | | | 5.15 | 5.22 | 5.88 | 5.28 | 4.93 | 6.38 |
| 30 | | | | | | | 5.17 | 5.19 | 5.86 | 5.25 | 4.92 | 6.45 |
| 31 | | | | | | | --- | 5.16 | --- | 5.22 | 4.91 | --- |
| MEAN | | | | | | | 5.35 | 5.20 | 5.63 | 5.45 | 5.07 | 5.98 |
| MAX | | | | | | | 5.77 | 5.40 | 6.12 | 5.83 | 5.23 | 6.81 |
| MIN | | | | | | | 5.11 | 5.08 | 5.13 | 5.22 | 4.91 | 4.84 |

## WATER-QUALITY RECORDS

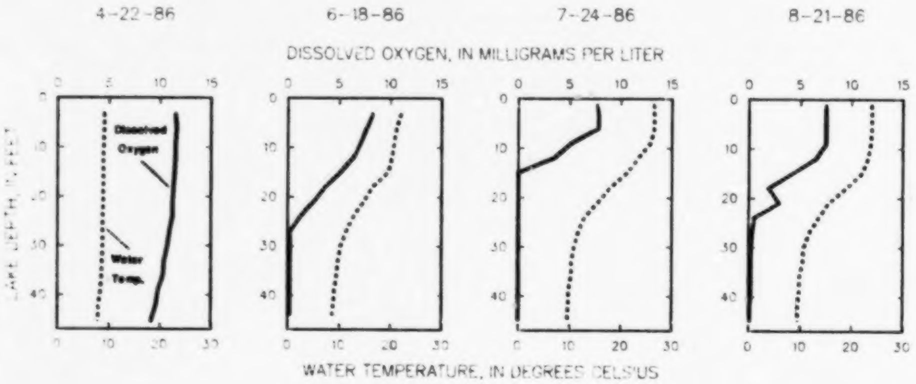
PERIOD OF RECORD.--February 20, 1984 to current year.

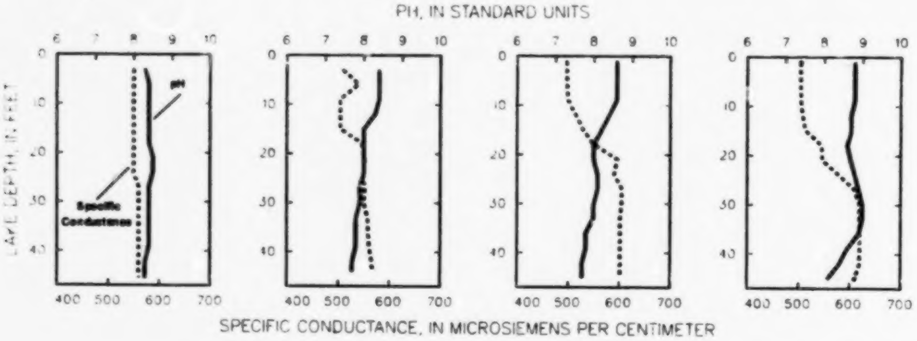
REMARKS.--Lake sampled near center at a depth of 47 feet.

### WATER QUALITY DATA, APRIL 22 TO AUGUST 21, 1986
(Milligrams per liter unless otherwise indicated)

| | Apr. 22 | | June 18 | | July 24 | | Aug. 21 | |
|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 45.5 | 3.0 | 44.0 | 3.0 | 45.5 | 3.0 | 45.0 |
| Specific conductance (uS) | 550 | 560 | 509 | 568 | 497 | 602 | 504 | 610 |
| pH | 8.3 | 8.3 | 8.4 | 7.7 | 8.6 | 7.7 | 8.8 | 8.1 |
| Water temperature (°C) | 9.0 | 8.0 | 22.0 | 8.5 | 26.5 | 9.5 | 24.0 | 9.5 |
| Color (Pt-Co. scale) | 30 | 30 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | 3.5 | 2.0 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- 2.2 | -- | -- 4.0 | -- | -- 2.4 | -- | -- 3.9 | -- |
| Dissolved oxygen | 11.5 | 9.1 | 8.3 | 0.2 | 7.8 | 0.0 | 7.5 | 0.1 |
| Hardness, as $CaCO_3$ | 290 | 290 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | 55 | 55 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | 37 | 36 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | 5.6 | 5.5 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | 3.0 | 3.3 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | 238 | 238 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | 43 | 43 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | 19 | 18 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | 4.2 | 4.5 | | | | | | |
| Solids, dissolved, at 180°C | 333 | 316 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | .39 | .39 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | .010 | .010 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | .040 | .070 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | .76 | .83 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | 1.2 | 1.3 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | .020 | .024 | .015 | .192 | .014 | .070 | .020 | .440 |
| Phosphorus, ortho, diss (as P) | .003 | .003 | -- | .160 | -- | .078 | -- | .009 |
| Iron, dissolved (Fe) ug/L | 13 | 24 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | 8 | 16 | -- | -- | -- | -- | -- | -- |
| Chlorophyll *a*, phyto. (ug/L) | 12.0[1/] | -- | 3.0 | -- | 9.0 | - | 3.0 | -- |

[1/] Adjusted from 8.0 ug/L by the Wisconsin State Laboratory of Hygiene





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## 04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI

LOCATION.--Lat 43°44'25", long 87°45'35", in SE 1/4 NE 1/4 sec.29, T.15 N., R.23 E., Sheboygan County, Hydrologic Unit 04030101, on left bank 400 ft upstream from bridge on State Highway 141, near west city limits of Sheboygan, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--418 mi$^2$.

PERIOD OF RECORD.--June 1916 to September 1924 (published as "near Sheboygan"), October 1950 to current year. Monthly discharge only for some periods published in WSP 1307, 1727.

REVISED RECORDS.--WSP 1307: 1917(M), 1919(M), 1921(M), 1923(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.00 ft above National Geodetic Vertical Datum of 1929. June 1916 to June 1924, nonrecording gage at site 0.7 mi downstream at different datum. November 1950 to June 1951, nonrecording gage at site 0.3 mi downstream at datum 3.15 ft lower.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair. Diurnal fluctuation caused by numerous powerplants above station.

AVERAGE DISCHARGE.--44 years (water years 1917-24, 1951-86), 259 ft$^3$/s, 8.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,680 ft$^3$/s Mar. 22, 1975, gage height, 11.64 ft; minimum observed, about 1 ft$^3$/s Aug. 27, 1922, gage height, 1.48 ft datum then in use, caused by shutdown of powerplants.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 0945 | *4,000 | 8.74 | Sept. 11 | 1930 | 3,360 | 8.07 |
| Nov. 16 | 1845 | 2,430 | 6.99 | Sept. 22 | 1945 | 2,100 | 6.56 |
| Mar. 19 | 0900 | ice jam | *9.13 | Sept. 25 | 1415 | 3,420 | 8.14 |
| Mar. 24 | 1930 | 3,360 | 8.27 | | | | |

Minimum discharge, 49 ft$^3$/s Aug. 21, gage height, 1.79 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 25 to Feb. 25, Feb. 28, and Mar. 6-22.)

| | | | |
|---|---|---|---|
| 1.9 | 65 | 4.0 | 570 |
| 2.0 | 80 | 5.0 | 992 |
| 2.5 | 165 | 7.0 | 2,440 |
| 3.0 | 270 | 9.0 | 4,260 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 169 | 888 | 460 | 230 | 200 | 205 | 1490 | 272 | 131 | 293 | 117 | 74 |
| 2 | 165 | 3580 | 500 | 220 | 200 | 199 | 1350 | 259 | 123 | 294 | 136 | 73 |
| 3 | 155 | 2520 | 460 | 220 | 200 | 201 | 1030 | 230 | 115 | 299 | 145 | 80 |
| 4 | 242 | 2020 | 420 | 220 | 210 | 217 | 951 | 219 | 115 | 275 | 121 | 99 |
| 5 | 581 | 1460 | 390 | 220 | 290 | 222 | 915 | 221 | 126 | 259 | 114 | 93 |
| 6 | 434 | 1030 | 360 | 210 | 320 | 220 | 884 | 225 | 137 | 241 | 118 | 85 |
| 7 | 338 | 1060 | 340 | 210 | 300 | 210 | 804 | 210 | 125 | 226 | 124 | 78 |
| 8 | 289 | 1000 | 320 | 210 | 280 | 200 | 720 | 182 | 117 | 181 | 126 | 73 |
| 9 | 280 | 1010 | 300 | 200 | 270 | 190 | 643 | 173 | 112 | 210 | 118 | 71 |
| 10 | 349 | 1330 | 290 | 200 | 250 | 200 | 579 | 166 | 119 | 189 | 111 | 158 |
| 11 | 377 | 1310 | 280 | 200 | 240 | 250 | 525 | 135 | 130 | 178 | 91 | 2790 |
| 12 | 805 | 1410 | 280 | 200 | 230 | 360 | 476 | 138 | 219 | 172 | 106 | 2550 |
| 13 | 1120 | 1870 | 270 | 200 | 230 | 490 | 396 | 143 | 266 | 134 | 102 | 1880 |
| 14 | 771 | 1970 | 260 | 200 | 220 | 620 | 418 | 131 | 234 | 102 | 97 | 1540 |
| 15 | 576 | 1680 | 260 | 190 | 220 | 840 | 505 | 203 | 230 | 99 | 95 | 1110 |
| 16 | 502 | 2010 | 260 | 190 | 220 | 1000 | 417 | 192 | 252 | 115 | 99 | 936 |
| 17 | 433 | 1870 | 270 | 200 | 220 | 1300 | 332 | 261 | 298 | 125 | 100 | 929 |
| 18 | 485 | 2010 | 270 | 200 | 210 | 1800 | 360 | 301 | 324 | 120 | 169 | 957 |
| 19 | 747 | 2040 | 260 | 210 | 210 | 2700 | 391 | 297 | 386 | 126 | 186 | 986 |
| 20 | 631 | 1680 | 260 | 220 | 210 | 2300 | 406 | 250 | 413 | 139 | 143 | 972 |
| 21 | 478 | 1290 | 260 | 220 | 220 | 2200 | 365 | 223 | 404 | 127 | 118 | 1120 |
| 22 | 391 | 1010 | 260 | 230 | 230 | 2100 | 337 | 213 | 393 | 119 | 108 | 1920 |
| 23 | 365 | 906 | 250 | 230 | 230 | 2830 | 317 | 205 | 377 | 113 | 97 | 1820 |
| 24 | 654 | 789 | 250 | 230 | 220 | 3140 | 306 | 199 | 374 | 104 | 89 | 1480 |
| 25 | 625 | 700 | 250 | 220 | 220 | 2920 | 295 | 190 | 345 | 123 | 78 | 1660 |
| 26 | 476 | 640 | 250 | 220 | 213 | 3020 | 318 | 182 | 319 | 222 | 92 | 2630 |
| 27 | 396 | 580 | 240 | 220 | 221 | 2810 | 324 | 167 | 417 | 193 | 109 | 2520 |
| 28 | 340 | 540 | 240 | 210 | 220 | 2390 | 314 | 157 | 421 | 175 | 111 | 2190 |
| 29 | 270 | 500 | 230 | 210 | --- | 2100 | 293 | 160 | 361 | 156 | 95 | 1800 |
| 30 | 246 | 470 | 230 | 200 | --- | 1890 | 282 | 154 | 315 | 149 | 84 | 1630 |
| 31 | 246 | --- | 230 | 200 | --- | 1670 | --- | 143 | --- | 138 | 77 | --- |
| TOTAL | 13936 | 41173 | 9200 | 6540 | 6504 | 40794 | 16743 | 6201 | 7698 | 5396 | 3476 | 34304 |
| MEAN | 450 | 1372 | 297 | 211 | 232 | 1316 | 558 | 200 | 257 | 174 | 112 | 1143 |
| MAX | 1120 | 3580 | 500 | 230 | 320 | 3140 | 1490 | 301 | 421 | 299 | 186 | 2790 |
| MIN | 155 | 470 | 230 | 190 | 200 | 190 | 282 | 131 | 112 | 99 | 77 | 71 |
| CFSM | 1.08 | 3.28 | .71 | .51 | .56 | 3.15 | 1.34 | .48 | .62 | .42 | .27 | 2.73 |
| IN. | 1.24 | 3.66 | .82 | .58 | .58 | 3.63 | 1.49 | .55 | .69 | .48 | .31 | 3.05 |

CAL YR 1985 TOTAL 168214 MEAN 461 MAX 3580 MIN 40 CFSM 1.10 IN 14.97
WTR YR 1986 TOTAL 191965 MEAN 526 MAX 3580 MIN 71 CFSM 1.26 IN 17.08

## 432324088154200 BIG CEDAR LAKE NEAR WEST BEND, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°23'24", long 88°15'42", in SE 1/4 sec. 30, T.11 N., R.19 E., Washington County, Hydrologic Unit 04040003, 4.6 mi southwest of West Bend.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Louis Ottmer, Jr. Elevation of gage is 1031 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.42 ft, Sept. 12, 1986; minimum observed, 7.72 ft, July 23, 31, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.42 ft, Sept. 12; minimum observed, 7.90 ft, Aug. 15.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|
| MAY 28 | 7.94 | JUNE 25 | 7.92 | JULY 9 | 7.97 | JULY 28 | 7.99 | AUG. 15 | 7.90 |
| JUNE 17 | 7.91 | JULY 2 | 7.97 | JULY 21 | 8.02 | AUG. 10 | 7.99 | SEPT. 12 | 8.42 |
| | | | | | | | | SEPT. 25 | 8.40 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°24'01", long 88°15'22", in SW 1/4 sec. 20, T.11 N., R.19 E., Washington County, Hydrologic Unit 04040003, at north end of lake, and 4.1 mi southwest of West Bend.

PERIOD OF RECORD.--June 1985 to current year.

REMARKS.--Secchi disc readings made by Louis Ottmer, Jr.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|
| MAY 28 | 2.1 | JUNE 25 | 2.1 | JULY 9 | 2.1 | JULY 28 | 1.5 | AUG. 7 | 1.5 |
| JUNE 17 | 2.1 | JULY 2 | 2.1 | JULY 21 | 1.8 | AUG. 2 | 1.5 | | |

## 04086500 CEDAR CREEK NEAR CEDARBURG, WI

LOCATION.--Lat 43°19'23", long 87°58'43", in SE 1/4 SW 1/4 sec.14, T.10 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on left bank 40 ft upstream from bridge on State Highway 60, 1.9 mi north of Cedarburg and 6.6 mi upstream from mouth.

DRAINAGE AREA.--120 mi$^2$.

PERIOD OF RECORD.--August 1930 to September 1970, July 1973 to September 1981, August 1983 to current year.

REVISED RECORDS.--WSP 1307: 1932-34(M), 1937(M), 1939(M), 1945(M), 1948-49(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 795.33 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nonrecording gage and crest-stage gage August 1930 to September 1970 at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--51 years, 71.5 ft$^3$/s, 8.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, about 3,600 ft$^3$/s Mar. 30, 1960, gage height, 12.25 ft, from graph based on gage readings, backwater from ice; minimum observed, 0.20 ft$^3$/s Aug. 9-12, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 3 | 1845 | 620 | 7.69 | Sept. 12 | 1630 | *1,600 | 10.05 |
| Nov. 18 | 1200 | 709 | 7.94 | Sept. 26 | 1330 | 1,180 | 9.13 |
| Mar. 19 | 0715 | ice jam | *10.34 | | | | |

Minimum daily discharge, 22 ft$^3$/s Aug. 25.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 24-29, Dec. 3 to Mar. 19.)

| | | | |
|---|---|---|---|
| 5.3 | 22 | 7.0 | 398 |
| 5.5 | 44 | 8.0 | 732 |
| 5.7 | 74 | 9.0 | 1,130 |
| 6.0 | 134 | 10.0 | 1,570 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 173 | 174 | 56 | 64 | 72 | 241 | 109 | 39 | 40 | 40 | 37 |
| 2 | 26 | 493 | 232 | 54 | 62 | 70 | 213 | 99 | 36 | 39 | 52 | 33 |
| 3 | 25 | 589 | 200 | 54 | 62 | 72 | 188 | 87 | 36 | 36 | 55 | 32 |
| 4 | 33 | 579 | 170 | 54 | 68 | 76 | 205 | 82 | 39 | 32 | 44 | 32 |
| 5 | 65 | 480 | 160 | 52 | 84 | 80 | 218 | 82 | 47 | 29 | 38 | 32 |
| 6 | 55 | 396 | 150 | 52 | 80 | 78 | 226 | 87 | 51 | 26 | 42 | 31 |
| 7 | 43 | 333 | 130 | 52 | 76 | 76 | 201 | 81 | 51 | 24 | 149 | 29 |
| 8 | 37 | 278 | 120 | 52 | 74 | 72 | 170 | 76 | 46 | 25 | 148 | 27 |
| 9 | 39 | 242 | 120 | 52 | 70 | 70 | 144 | 70 | 41 | 29 | 96 | 27 |
| 10 | 89 | 258 | 110 | 52 | 68 | 200 | 127 | 64 | 36 | 29 | 72 | 73 |
| 11 | 91 | 275 | 98 | 52 | 66 | 350 | 117 | 61 | 39 | 34 | 66 | 1100 |
| 12 | 107 | 310 | 90 | 52 | 66 | 470 | 110 | 63 | 78 | 59 | 56 | 1480 |
| 13 | 189 | 372 | 80 | 52 | 64 | 540 | 115 | 65 | 82 | 222 | 50 | 1400 |
| 14 | 150 | 460 | 74 | 52 | 62 | 600 | 122 | 62 | 65 | 242 | 45 | 1060 |
| 15 | 113 | 494 | 94 | 54 | 62 | 680 | 193 | 64 | 61 | 177 | 44 | 791 |
| 16 | 91 | 537 | 90 | 56 | 60 | 760 | 190 | 76 | 60 | 151 | 42 | 611 |
| 17 | 72 | 531 | 82 | 56 | 60 | 840 | 164 | 76 | 52 | 131 | 37 | 485 |
| 18 | 68 | 638 | 80 | 60 | 64 | 1000 | 139 | 137 | 44 | 93 | 34 | 395 |
| 19 | 94 | 622 | 78 | 64 | 70 | 1100 | 125 | 125 | 39 | 72 | 33 | 326 |
| 20 | 141 | 624 | 74 | 70 | 78 | 906 | 115 | 90 | 36 | 66 | 30 | 271 |
| 21 | 126 | 532 | 72 | 74 | 76 | 785 | 113 | 74 | 33 | 56 | 30 | 226 |
| 22 | 104 | 433 | 70 | 80 | 72 | 598 | 110 | 69 | 33 | 49 | 29 | 297 |
| 23 | 92 | 350 | 66 | 88 | 74 | 537 | 102 | 62 | 41 | 42 | 29 | 505 |
| 24 | 167 | 270 | 70 | 88 | 80 | 499 | 98 | 57 | 45 | 36 | 23 | 562 |
| 25 | 196 | 210 | 68 | 86 | 84 | 475 | 94 | 52 | 50 | 54 | 22 | 679 |
| 26 | 156 | 190 | 66 | 82 | 84 | 484 | 142 | 46 | 47 | 70 | 30 | 906 |
| 27 | 117 | 170 | 64 | 80 | 80 | 477 | 193 | 44 | 49 | 54 | 108 | 895 |
| 28 | 96 | 160 | 62 | 76 | 76 | 445 | 157 | 45 | 70 | 53 | 90 | 784 |
| 29 | 85 | 150 | 60 | 72 | --- | 392 | 128 | 49 | 52 | 59 | 64 | 728 |
| 30 | 77 | 143 | 58 | 68 | --- | 336 | 114 | 58 | 45 | 47 | 48 | 694 |
| 31 | 71 | --- | 56 | 62 | --- | 283 | --- | 46 | --- | 42 | 42 | --- |
| TOTAL | 2842 | 11292 | 3118 | 1954 | 1986 | 13423 | 4574 | 2258 | 1443 | 2118 | 1688 | 14548 |
| MEAN | 91.7 | 376 | 101 | 63.0 | 70.9 | 433 | 152 | 72.8 | 48.1 | 68.3 | 54.5 | 485 |
| MAX | 196 | 638 | 232 | 88 | 84 | 1100 | 241 | 137 | 82 | 242 | 149 | 1480 |
| MIN | 25 | 143 | 56 | 52 | 60 | 70 | 94 | 44 | 33 | 24 | 22 | 27 |
| CFSM | .76 | 3.13 | .84 | .53 | .59 | 3.61 | 1.27 | .61 | .40 | .57 | .45 | 4.04 |
| IN. | .88 | 3.50 | .97 | .61 | .62 | 4.16 | 1.42 | .70 | .45 | .66 | .52 | 4.51 |

CAL YR 1985 TOTAL 49908 MEAN 137 MAX 780 MIN 13 CFSM 1.14 IN 15.47
WTR YR 1986 TOTAL 61244 MEAN 168 MAX 1480 MIN 22 CFSM 1.40 IN 18.99

## 04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI

LOCATION.--Lat 43°16'49", long 87°56'30", in NW 1/4 NW 1/4 sec.6, T.9 N., R.22 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 60 ft downstream from Pioneer Road bridge, 2.6 mi southeast of Cedarburg, 1.0 mi west of I-43, and 26.25 mi upstream from mouth.

DRAINAGE AREA.--607 $mi^2$.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 653.558 ft above National Geodetic Vertical Datum of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark).

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating tables below. Records good except those for ice-affected periods, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,640 $ft^3$/s Sept. 11, 1986, gage height, 11.97 ft; maximum gage height, 12.85 ft Mar. 1, 1985 (backwater from ice); minimum daily, 72 $ft^3$/s July 24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,640 $ft^3$/s Sept. 11, gage height, 11.97 ft; minimum daily, 87 $ft^3$/s Aug. 24, 25.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 26 to June 23; stage-discharge relation affected by ice Nov. 25-29, Dec. 3 to Mar. 18.)

Oct. 1 to Sept. 11 (0245)

| | | | |
|---|---|---|---|
| 5.3 | 54 | 7.0 | 866 |
| 5.4 | 80 | 8.0 | 1,480 |
| 5.7 | 200 | 10.0 | 2,870 |
| 6.0 | 336 | 11.3 | 3,860 |

Sept. 11 (0300) to Sept. 30

| | | | |
|---|---|---|---|
| 6.8 | 814 | 10.0 | 2,960 |
| 7.0 | 923 | 11.2 | 3,960 |
| 8.0 | 1,520 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 230 | 562 | 799 | 360 | 380 | 420 | 1440 | 464 | 241 | 242 | 196 | 188 |
| 2 | 221 | 2080 | 763 | 350 | 370 | 410 | 1370 | 429 | 215 | 241 | 233 | 166 |
| 3 | 219 | 2420 | 760 | 340 | 360 | 410 | 1180 | 398 | 227 | 186 | 236 | 280 |
| 4 | 267 | 2310 | 740 | 340 | 390 | 440 | 1100 | 376 | 179 | 196 | 215 | 227 |
| 5 | 349 | 2040 | 740 | 340 | 470 | 460 | 1110 | 363 | 204 | 188 | 202 | 193 |
| 6 | 399 | 1810 | 720 | 330 | 450 | 450 | 1120 | 374 | 296 | 178 | 238 | 180 |
| 7 | 426 | 1650 | 720 | 330 | 430 | 430 | 1040 | 365 | 190 | 177 | 394 | 154 |
| 8 | 421 | 1450 | 700 | 330 | 410 | 410 | 939 | 334 | 207 | 211 | 439 | 140 |
| 9 | 439 | 1410 | 680 | 320 | 400 | 400 | 856 | 363 | 196 | 178 | 238 | 141 |
| 10 | 514 | 1400 | 620 | 320 | 390 | 620 | 778 | 362 | 204 | 143 | 192 | 295 |
| 11 | 539 | 1200 | 580 | 310 | 380 | 920 | 707 | 363 | 227 | 192 | 207 | 3940 |
| 12 | 653 | 1320 | 520 | 310 | 370 | 1200 | 639 | 371 | 322 | 321 | 190 | 3960 |
| 13 | 975 | 1390 | 470 | 300 | 350 | 1500 | 596 | 398 | 301 | 457 | 169 | 3320 |
| 14 | 882 | 1750 | 360 | 300 | 350 | 1700 | 591 | 402 | 294 | 444 | 160 | 2510 |
| 15 | 780 | 1730 | 490 | 310 | 350 | 2000 | 627 | 405 | 279 | 342 | 154 | 2010 |
| 16 | 670 | 1920 | 560 | 310 | 350 | 2200 | 661 | 439 | 276 | 328 | 143 | 1690 |
| 17 | 630 | 1970 | 540 | 330 | 350 | 2700 | 706 | 491 | 256 | 349 | 135 | 1500 |
| 18 | 621 | 2360 | 540 | 350 | 350 | 3200 | 658 | 596 | 232 | 264 | 125 | 1330 |
| 19 | 665 | 2600 | 520 | 370 | 350 | 3810 | 619 | 675 | 217 | 238 | 109 | 1110 |
| 20 | 711 | 2390 | 500 | 390 | 360 | 3610 | 570 | 693 | 203 | 222 | 110 | 945 |
| 21 | 777 | 2060 | 480 | 430 | 380 | 3400 | 564 | 506 | 195 | 191 | 105 | 819 |
| 22 | 673 | 1750 | 460 | 470 | 400 | 2980 | 538 | 454 | 195 | 181 | 96 | 1030 |
| 23 | 636 | 1490 | 450 | 500 | 420 | 2980 | 501 | 350 | 205 | 178 | 91 | 1770 |
| 24 | 808 | 1140 | 440 | 490 | 430 | 2780 | 471 | 262 | 221 | 172 | 87 | 1800 |
| 25 | 782 | 980 | 440 | 490 | 430 | 2640 | 448 | 320 | 284 | 220 | 87 | 2280 |
| 26 | 687 | 900 | 430 | 470 | 430 | 2670 | 548 | 307 | 183 | 287 | 156 | 3480 |
| 27 | 596 | 800 | 420 | 450 | 430 | 2540 | 542 | 298 | 248 | 257 | 454 | 3730 |
| 28 | 539 | 720 | 400 | 430 | 430 | 2400 | 532 | 299 | 318 | 237 | 390 | 3040 |
| 29 | 491 | 640 | 390 | 420 | --- | 2220 | 513 | 298 | 244 | 189 | 279 | 2880 |
| 30 | 446 | 695 | 380 | 400 | --- | 1960 | 487 | 301 | 211 | 207 | 242 | 2670 |
| 31 | 366 | --- | 370 | 390 | --- | 1710 | --- | 272 | --- | 199 | 212 | --- |
| TOTAL | 17412 | 46937 | 16982 | 11580 | 10960 | 55570 | 22451 | 12328 | 7070 | 7415 | 6284 | 47778 |
| MEAN | 562 | 1565 | 548 | 374 | 391 | 1793 | 748 | 398 | 236 | 239 | 203 | 1593 |
| MAX | 975 | 2600 | 799 | 500 | 470 | 3810 | 1440 | 693 | 322 | 457 | 454 | 3960 |
| MIN | 219 | 562 | 360 | 300 | 350 | 400 | 448 | 262 | 179 | 143 | 87 | 140 |
| CFSM | .93 | 2.58 | .90 | .62 | .64 | 2.95 | 1.23 | .66 | .39 | .39 | .33 | 2.62 |
| IN. | 1.07 | 2.88 | 1.04 | .71 | .67 | 3.41 | 1.38 | .76 | .43 | .45 | .39 | 2.93 |

CAL YR 1985 TOTAL 230805 MEAN 632 MAX 2700 MIN 72 CFSM 1.04 IN 14.14
WTR YR 1986 TOTAL 262767 MEAN 720 MAX 3960 MIN 87 CFSM 1.19 IN 16.10

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°06'00", long 87°54'32", in NE 1/4 sec.5, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft downstream from Port Washington Road bridge and 6.6 mi upstream from mouth.

DRAINAGE AREA.--696 $mi^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1914 to current year. Published as "near Milwaukee" prior to 1936.

REVISED RECORDS.--WSP 564: 1918(M). WSP 924: 1940. WSP 1207: 1936(M). WSP 1337: 1915-17(M), 1918, 1919-21(M), 1922, 1923(M), 1924, 1925-33(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 607.23 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Apr. 6, 1929, nonrecording gage near present site at different datum. Apr. 6, 1929, to Jan. 8, 1934, nonrecording gage at bridge 0.5 mi upstream at different datum.

REMARKS.--Estimated daily discharge: Sept. 11 (partial day) and ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair. Occasional regulation caused by recreation dam approximately 1,200 ft upstream.

AVERAGE DISCHARGE.--72 years, 424 $ft^3/s$, 8.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 $ft^3/s$ Mar. 20, 1918, Aug. 6, 1924, gage height, 9.00 ft datum then in use, from floodmark for 1918, from graph based on gage reading for 1924, no flow Sept. 8, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 4 | 0915 | 3,770 | 5.26 | Aug. 26 | 1045 | 3,830 | 5.29 |
| Nov. 18 | 1015 | 3,970 | 5.37 | Sept. 11 | unknown | *5,920 | *6.35 |
| Mar. 17 | 1145 | 4,760 | 5.79 | Sept. 26 | 1115 | 4,740 | 5.78 |
| Aug. 6 | 1545 | 5,620 | 6.21 | | | | |

Minimum discharge, 14 $ft^3/s$ Aug. 27, gage height, 1.54 ft, result of regulation.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Dec. 12, Dec. 16 to Feb. 24, Mar. 6-15.)

| | | | |
|---|---|---|---|
| 1.8 | 81 | 3.0 | 756 |
| 2.0 | 156 | 4.0 | 1,830 |
| 2.5 | 412 | 5.0 | 3,320 |
| | | 6.0 | 5,180 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 261 | 1180 | 1300 | 410 | 440 | 467 | 1740 | 585 | 271 | 263 | 228 | 217 |
| 2 | 251 | 2650 | 980 | 410 | 430 | 474 | 1520 | 558 | 242 | 299 | 299 | 194 |
| 3 | 248 | 2880 | 880 | 400 | 430 | 472 | 1450 | 514 | 238 | 242 | 259 | 210 |
| 4 | 428 | 2790 | 860 | 400 | 660 | 512 | 1280 | 469 | 247 | 213 | 255 | 325 |
| 5 | 343 | 2490 | 840 | 390 | 620 | 515 | 1270 | 463 | 219 | 213 | 236 | 221 |
| 6 | 425 | 2130 | 840 | 390 | 580 | 520 | 1240 | 448 | 306 | 237 | 1510 | 213 |
| 7 | 454 | 1930 | 840 | 380 | 540 | 490 | 1190 | 445 | 337 | 225 | 400 | 192 |
| 8 | 490 | 1720 | 820 | 380 | 500 | 480 | 1080 | 387 | 240 | 321 | 605 | 177 |
| 9 | 620 | 2230 | 780 | 370 | 470 | 470 | 991 | 400 | 237 | 220 | 400 | 293 |
| 10 | 594 | 2250 | 720 | 360 | 460 | 700 | 908 | 398 | 319 | 199 | 307 | 786 |
| 11 | 613 | 1730 | 700 | 370 | 440 | 1000 | 830 | 396 | 313 | 224 | 272 | 4970 |
| 12 | 900 | 1570 | 640 | 370 | 420 | 1400 | 756 | 408 | 405 | 329 | 267 | 5130 |
| 13 | 1000 | 1700 | 545 | 360 | 400 | 1700 | 698 | 390 | 390 | 592 | 242 | 4150 |
| 14 | 1050 | 1990 | 417 | 360 | 400 | 2000 | 792 | 395 | 401 | 558 | 261 | 3110 |
| 15 | 918 | 2040 | 586 | 360 | 400 | 2300 | 794 | 462 | 364 | 574 | 225 | 2240 |
| 16 | 808 | 2410 | 640 | 360 | 400 | 2540 | 720 | 449 | 338 | 477 | 211 | 1950 |
| 17 | 706 | 2360 | 620 | 380 | 400 | 3230 | 834 | 578 | 322 | 450 | 197 | 1730 |
| 18 | 756 | 3140 | 600 | 400 | 400 | 3640 | 786 | 617 | 291 | 380 | 187 | 1560 |
| 19 | 859 | 3250 | 580 | 440 | 410 | 4310 | 734 | 492 | 283 | 366 | 173 | 1280 |
| 20 | 812 | 2960 | 560 | 460 | 420 | 4160 | 706 | 768 | 264 | 438 | 162 | 1080 |
| 21 | 841 | 2500 | 540 | 490 | 430 | 3730 | 684 | 630 | 237 | 297 | 161 | 982 |
| 22 | 848 | 2160 | 520 | 540 | 460 | 3570 | 650 | 532 | 303 | 253 | 152 | 1290 |
| 23 | 790 | 1810 | 500 | 580 | 480 | 3390 | 613 | 466 | 302 | 229 | 143 | 1720 |
| 24 | 1290 | 1400 | 520 | 560 | 490 | 3290 | 583 | 324 | 336 | 219 | 138 | 2110 |
| 25 | 1060 | 1030 | 540 | 540 | 500 | 2960 | 559 | 310 | 298 | 505 | 136 | 2760 |
| 26 | 869 | 1000 | 500 | 520 | 501 | 3050 | 777 | 353 | 271 | 295 | 871 | 3570 |
| 27 | 754 | 940 | 480 | 500 | 492 | 2930 | 696 | 386 | 594 | 322 | 288 | 4630 |
| 28 | 666 | 860 | 470 | 490 | 500 | 2710 | 676 | 340 | 405 | 657 | 520 | 3940 |
| 29 | 606 | 820 | 450 | 480 | --- | 2540 | 649 | 327 | 340 | 274 | 332 | 3920 |
| 30 | 614 | 760 | 440 | 470 | --- | 2280 | 637 | 320 | 251 | 247 | 283 | 3320 |
| 31 | 475 | --- | 420 | 450 | --- | 1970 | --- | 309 | --- | 282 | 241 | --- |
| TOTAL | 21349 | 58680 | 20128 | 13370 | 13073 | 63800 | 26843 | 13919 | 9364 | 10400 | 9961 | 58270 |
| MEAN | 689 | 1956 | 649 | 431 | 467 | 2058 | 895 | 449 | 312 | 335 | 321 | 1942 |
| MAX | 1290 | 3250 | 1300 | 580 | 660 | 4310 | 1740 | 768 | 594 | 657 | 1510 | 5130 |
| MIN | 248 | 760 | 417 | 360 | 400 | 467 | 559 | 309 | 219 | 199 | 136 | 177 |
| CFSM | .99 | 2.81 | .93 | .62 | .67 | 2.96 | 1.29 | .65 | .45 | .48 | .46 | 2.79 |
| IN. | 1.14 | 3.14 | 1.08 | .71 | .70 | 3.41 | 1.43 | .74 | .50 | .56 | .53 | 3.11 |

CAL YR 1985 TOTAL 266534 MEAN 730 MAX 3250 MIN 84 CFSM 1.05 IN 14.25
WTR YR 1986 TOTAL 319157 MEAN 874 MAX 5130 MIN 136 CFSM 1.26 IN 17.06

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967-69, 1971, 1973 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | BARO-METRIC PRES-SURE (MM OF HG) (00025) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>13... | 0830 | 1840 | 585 | 7.90 | 4.0 | 4.0 | 11.4 | 753 | 88 |
| MAR , 1986<br>25... | 1000 | 2980 | 440 | 7.70 | 3.0 | 4.3 | 12.9 | 745 | 98 |
| MAY<br>29... | 1045 | 327 | 740 | 8.60 | 19.0 | 30 | 10.6 | 747 | 117 |
| JUL<br>15... | 1045 | 448 | 600 | 8.60 | 22.0 | 2.0 | 93.0 | 756 | 1070 |

| DATE | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM AD-SORP-TION RATIO (00931) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>13... | K2200 | K3500 | 280 | 48 | 61 | 31 | 21 | 14 | .6 | 2.9 |
| MAR , 1986<br>25... | K18 | K43 | 210 | 44 | 47 | 23 | 9.8 | 9 | .3 | 3.0 |
| MAY<br>29... | 370 | 150 | 320 | 39 | 67 | 37 | 29 | 16 | .7 | 1.8 |
| JUL<br>15... | 550 | 220 | 260 | 44 | 56 | 30 | 24 | 16 | .7 | 3.1 |

| DATE | BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440) | CAR-BONATE IT-FLD (MG/L AS CO3) (99445) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>13... | 283 | -- | 227 | 5.7 | 34 | 39 | .10 | 9.9 | 355 |
| MAR , 1986<br>25... | 205 | -- | 165 | 6.5 | 18 | 21 | .10 | 7.7 | 259 |
| MAY<br>29... | -- | -- | 325 | 1.6 | 42 | 28 | .10 | 1.7 | 425 |
| JUL<br>15... | 262 | 3.0 | 213 | 1.0 | 32 | 44 | .10 | 8.3 | 340 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>13... | 340 | .48 | 1760 | .88 | .070 | .80 | .100 | .070 | .050 |
| MAR , 1986<br>25... | 240 | .35 | 2080 | 1.2 | .160 | .90 | .100 | .070 | .050 |
| MAY<br>29... | 380 | .58 | 375 | .70 | .030 | 1.0 | .080 | .030 | .010 |
| JUL<br>15... | 340 | .46 | 411 | .99 | .050 | 1.5 | .160 | .040 | .020 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | |
| 13... | 0830 | 1840 | 40 | 1 | 33 | <.5 | <1 | 3 | <3 | 5 |
| MAR , 1986 | | | | | | | | | | |
| 25... | 1000 | 2980 | <10 | <1 | 25 | <.5 | <1 | <1 | <3 | 5 |
| JUL | | | | | | | | | | |
| 15... | 1045 | 448 | <10 | 3 | 36 | <.5 | <1 | <1 | <3 | 4 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | | | | | |
| 13... | 46 | 1 | <4 | 12 | <.1 | <10 | 1 | <1 | 160 | <6 | 17 |
| MAR , 1986 | | | | | | | | | | | |
| 25... | 39 | 1 | 6 | 12 | <.1 | <10 | 2 | <1 | 120 | 6 | 23 |
| JUL | | | | | | | | | | | |
| 15... | 17 | <5 | 11 | 5 | <.1 | <10 | 2 | <1 | 200 | <6 | 12 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | |
| 13... | 0830 | 1840 | 585 | 4.0 | 21 | 104 | 82 |
| 20... | 1225 | 2990 | 540 | 5.0 | -- | -- | -- |
| JAN , 1986 | | | | | | | |
| 08... | 1250 | 377 | 670 | 0.0 | -- | -- | -- |
| FEB | | | | | | | |
| 25... | 1305 | 483 | 830 | 0.0 | -- | -- | -- |
| MAR | | | | | | | |
| 25... | 1000 | 2980 | 440 | 3.0 | 23 | 185 | 69 |
| MAY | | | | | | | |
| 29... | 1045 | 327 | 740 | 19.0 | 23 | 20 | 90 |
| JUN | | | | | | | |
| 03... | 1250 | 229 | 680 | 19.0 | -- | -- | -- |
| JUL | | | | | | | |
| 15... | 1045 | 448 | 600 | 22.0 | 84 | 102 | 99 |
| 29... | 1245 | 273 | 575 | 26.0 | -- | -- | -- |
| SEP | | | | | | | |
| 08... | 1530 | 166 | 605 | 19.5 | -- | -- | -- |
| 11... | 1630 | 5600 | 320 | 19.5 | -- | -- | -- |

## 04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI

LOCATION.--Lat 43°10'22", long 88°06'14", in SE 1/4 NE 1/4 sec.10, T.8 N., R.20 E., Waukesha County, Hydrologic Unit 04040003, on right bank, 150 ft upstream from Pilgrim Road (County Trunk Highway YY) bridge in Menomonee Falls, at mile 21.1.

DRAINAGE AREA.--34.7 mi$^2$.

PERIOD OF RECORD.--November 1974 to September 1977, July 1979 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.50 ft above National Geodetic Vertical Datum of 1929 (University of Wisconsin bench mark).

REMARKS.--Estimated discharges: None, except for ice periods listed in rating table below. Records good except those for ice periods, which are fair. Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi upstream.

AVERAGE DISCHARGE.--9 years (1976-77, 1980-86) 32.3 ft$^3$/s, 12.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft$^3$/s Sept. 11, 1986, gage height, 6.49 ft; maximum gage height, 6.57 ft July 13, 1981; minimum discharge, 0.85 ft$^3$/s July 29, 30, and Aug. 13, 1982, gage height, 2.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 380 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 19 | 2325 | 409 | 4.84 | Sept. 11 | 0405 | *1,440 | *6.49 |
| July 19 | 1740 | 405 | 4.88 | Sept. 28 | 1845 | 409 | 4.89 |
| Aug. 6 | 1550 | 670 | 5.43 | | | | |

Minimum, 6.0 ft$^3$/s Oct. 3, gage height, 2.84 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26-29, and Dec. 3 to Mar. 17.)

| | | | |
|---|---|---|---|
| 2.8 | 6.0 | 4.0 | 131 |
| 3.0 | 14 | 4.5 | 264 |
| 3.2 | 26 | 5.0 | 456 |
| 3.4 | 43 | 5.5 | 710 |
| 3.7 | 80 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.3 | 119 | 105 | 16 | 24 | 18 | 47 | 27 | 9.2 | 16 | 11 | 11 |
| 2 | 6.3 | 254 | 125 | 16 | 21 | 18 | 42 | 22 | 8.5 | 14 | 16 | 10 |
| 3 | 6.4 | 274 | 74 | 16 | 24 | 17 | 43 | 21 | 7.8 | 12 | 12 | 10 |
| 4 | 18 | 245 | 64 | 16 | 29 | 18 | 50 | 19 | 7.8 | 11 | 10 | 10 |
| 5 | 15 | 170 | 56 | 15 | 35 | 19 | 49 | 19 | 7.9 | 9.3 | 9.3 | 9.6 |
| 6 | 12 | 103 | 50 | 15 | 32 | 20 | 46 | 19 | 7.8 | 10 | 138 | 8.8 |
| 7 | 10 | 68 | 45 | 15 | 30 | 19 | 41 | 18 | 9.2 | 10 | 200 | 7.6 |
| 8 | 10 | 56 | 43 | 15 | 27 | 18 | 35 | 17 | 8.8 | 16 | 168 | 7.2 |
| 9 | 20 | 74 | 39 | 15 | 25 | 18 | 32 | 15 | 7.7 | 10 | 96 | 13 |
| 10 | 29 | 106 | 36 | 15 | 23 | 30 | 29 | 15 | 8.8 | 10 | 44 | 68 |
| 11 | 22 | 107 | 34 | 15 | 22 | 110 | 27 | 14 | 14 | 14 | 29 | 531 |
| 12 | 67 | 117 | 32 | 15 | 21 | 130 | 26 | 17 | 18 | 35 | 22 | 674 |
| 13 | 64 | 147 | 30 | 16 | 19 | 150 | 24 | 16 | 14 | 75 | 19 | 625 |
| 14 | 42 | 172 | 28 | 16 | 18 | 170 | 35 | 14 | 14 | 61 | 19 | 422 |
| 15 | 32 | 161 | 32 | 17 | 18 | 180 | 47 | 17 | 14 | 40 | 16 | 230 |
| 16 | 27 | 170 | 31 | 18 | 17 | 200 | 42 | 19 | 13 | 47 | 14 | 107 |
| 17 | 23 | 154 | 29 | 20 | 17 | 230 | 35 | 35 | 10 | 31 | 12 | 50 |
| 18 | 25 | 239 | 27 | 21 | 18 | 325 | 31 | 47 | 9.9 | 20 | 11 | 45 |
| 19 | 36 | 275 | 25 | 23 | 19 | 365 | 28 | 32 | 9.5 | 46 | 11 | 40 |
| 20 | 35 | 281 | 24 | 25 | 19 | 316 | 27 | 23 | 8.1 | 53 | 10 | 36 |
| 21 | 31 | 209 | 23 | 28 | 18 | 216 | 27 | 20 | 7.4 | 29 | 9.0 | 34 |
| 22 | 26 | 137 | 22 | 30 | 18 | 130 | 24 | 18 | 12 | 21 | 8.2 | 78 |
| 23 | 46 | 86 | 21 | 31 | 17 | 104 | 23 | 17 | 15 | 15 | 7.8 | 106 |
| 24 | 105 | 68 | 20 | 30 | 18 | 96 | 22 | 15 | 17 | 13 | 7.3 | 95 |
| 25 | 111 | 59 | 19 | 29 | 18 | 91 | 23 | 14 | 13 | 19 | 6.9 | 167 |
| 26 | 78 | 54 | 19 | 28 | 18 | 114 | 59 | 13 | 11 | 14 | 44 | 214 |
| 27 | 51 | 50 | 18 | 26 | 18 | 107 | 55 | 14 | 57 | 13 | 52 | 213 |
| 28 | 36 | 48 | 17 | 25 | 18 | 84 | 39 | 14 | 57 | 22 | 31 | 207 |
| 29 | 30 | 47 | 17 | 24 | --- | 69 | 33 | 13 | 31 | 16 | 20 | 249 |
| 30 | 27 | 47 | 16 | 23 | --- | 57 | 30 | 12 | 19 | 13 | 15 | 250 |
| 31 | 25 | --- | 16 | 22 | --- | 49 | --- | 11 | --- | 12 | 13 | --- |
| TOTAL | 1072.0 | 4097 | 1137 | 636 | 601 | 3488 | 1071 | 587 | 447.4 | 727.3 | 1081.5 | 4528.2 |
| MEAN | 34.6 | 137 | 36.7 | 20.5 | 21.5 | 113 | 35.7 | 18.9 | 14.9 | 23.5 | 34.9 | 151 |
| MAX | 111 | 281 | 125 | 31 | 35 | 365 | 59 | 47 | 57 | 75 | 200 | 674 |
| MIN | 6.3 | 47 | 16 | 15 | 17 | 17 | 22 | 11 | 7.4 | 9.3 | 6.9 | 7.2 |
| CFSM | 1.00 | 3.95 | 1.06 | .59 | .62 | 3.26 | 1.03 | .55 | .43 | .68 | 1.01 | 4.35 |
| IN. | 1.15 | 4.39 | 1.22 | .68 | .64 | 3.74 | 1.15 | .63 | .48 | .78 | 1.16 | 4.85 |

CAL YR 1985 TOTAL 15386.8 MEAN 42.2 MAX 350 MIN 2.3 CFSM 1.22 IN 16.49
WTR YR 1986 TOTAL 19473.4 MEAN 53.4 MAX 674 MIN 6.3 CFSM 1.54 IN 20.88

## 04087088 UNDERWOOD CREEK AT WAUWATOSA, WI

LOCATION.--Lat 43°03'17", long 88°02'46", in SW 1/4 NW 1/4 sec.20, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, at U.S. Highway 45, on right bank, just downstream of the Chicago, Milwaukee, St. Paul and Pacific Railroad bridge, on Milwaukee County Park Commission property, at Wauwatosa, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--18.2 mi$^2$.

PERIOD OF RECORD.--December 1974 to November 1979, July 1980 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area. WRD WI-85-1: 1984.

GAGE.--Water-stage recorder and steel plate weir. Elevation of gage is 690 ft, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 12 to Nov. 13, Mar. 10-18 and ice periods listed in rating table below. Records are good, except those for discharges less than 6 ft$^3$/s and greater than 600 ft$^3$/s which are fair to poor, and the periods of ice effect, which are poor.

AVERAGE DISCHARGE.--10 years (1976-79, 1981-86), 13.4 ft$^3$/s, 10.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft$^3$/s July 13, 1981, gage height, 5.55 ft; maximum gage height, 6.58 ft, Feb. 29, 1984, backwater from ice; no flow on all or part of many days during 1977 winter period.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft$^3$/s June 27, gage height, 6.24 ft; minimum daily, 2.8 ft$^3$/s Oct. 2.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13 to Feb. 3 and Feb. 7 to Mar. 9.)

| | | | |
|---|---|---|---|
| 1.9 | 2.0 | 2.4 | 24 |
| 2.0 | 3.7 | 2.7 | 57 |
| 2.1 | 6.5 | 3.0 | 105 |
| 2.2 | 10 | 3.5 | 211 |
| | | 4.0 | 353 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.0 | 120 | 210 | 5.8 | 20 | 9.0 | 14 | 8.1 | 4.2 | 6.7 | 8.8 | 6.3 |
| 2 | 2.8 | 160 | 112 | 6.8 | 14 | 15 | 9.8 | 7.6 | 4.0 | 6.0 | 11 | 7.1 |
| 3 | 3.2 | 30 | 74 | 8.0 | 10 | 13 | 19 | 7.3 | 4.2 | 5.5 | 8.4 | 7.5 |
| 4 | 34 | 9.4 | 28 | 7.0 | 121 | 25 | 13 | 7.3 | 4.3 | 5.4 | 8.6 | 7.6 |
| 5 | 7.9 | 9.4 | 22 | 6.6 | 48 | 20 | 14 | 10 | 5.9 | 5.1 | 9.2 | 6.5 |
| 6 | 3.4 | 13 | 19 | 6.2 | 16 | 15 | 9.3 | 7.2 | 4.6 | 27 | 244 | 5.5 |
| 7 | 3.0 | 9.2 | 16 | 6.0 | 12 | 9.0 | 8.7 | 6.2 | 4.5 | 11 | 119 | 5.6 |
| 8 | 8.5 | 7.5 | 14 | 5.8 | 9.0 | 7.0 | 8.5 | 6.0 | 4.4 | 41 | 43 | 6.3 |
| 9 | 61 | 90 | 13 | 5.8 | 7.0 | 20 | 8.0 | 5.9 | 4.1 | 9.0 | 19 | 42 |
| 10 | 18 | 30 | 15 | 5.6 | 6.4 | 250 | 7.5 | 5.7 | 27 | 15 | 21 | 131 |
| 11 | 4.8 | 12 | 12 | 5.6 | 5.8 | 110 | 7.5 | 6.8 | 7.8 | 14 | 12 | 296 |
| 12 | 50 | 20 | 11 | 5.6 | 5.6 | 15 | 7.5 | 9.6 | 9.3 | 34 | 9.3 | 105 |
| 13 | 10 | 70 | 10 | 7.0 | 5.4 | 70 | 7.4 | 6.1 | 4.5 | 17 | 8.5 | 34 |
| 14 | 5.6 | 64 | 9.6 | 6.0 | 5.2 | 30 | 30 | 5.5 | 11 | 8.2 | 23 | 21 |
| 15 | 3.8 | 28 | 9.0 | 5.8 | 5.0 | 22 | 15 | 17 | 4.8 | 51 | 10 | 18 |
| 16 | 3.4 | 75 | 8.6 | 8.0 | 4.9 | 21 | 10 | 9.4 | 4.1 | 31 | 8.1 | 15 |
| 17 | 3.2 | 30 | 8.0 | 15 | 5.4 | 20 | 8.5 | 38 | 3.6 | 14 | 7.5 | 26 |
| 18 | 12 | 138 | 7.6 | 11 | 6.0 | 110 | 8.2 | 20 | 3.8 | 10 | 7.4 | 18 |
| 19 | 25 | 94 | 7.4 | 7.0 | 70 | 76 | 8.1 | 7.5 | 4.6 | 14 | 7.4 | 15 |
| 20 | 9.0 | 55 | 7.0 | 6.2 | 30 | 33 | 9.7 | 6.4 | 4.3 | 8.3 | 7.1 | 11 |
| 21 | 4.2 | 31 | 6.8 | 6.6 | 20 | 21 | 14 | 6.2 | 3.9 | 8.0 | 7.2 | 12 |
| 22 | 3.7 | 29 | 6.6 | 7.2 | 11 | 16 | 7.8 | 5.8 | 12 | 7.5 | 7.2 | 41 |
| 23 | 5.0 | 22 | 7.8 | 6.6 | 7.0 | 15 | 7.1 | 5.6 | 18 | 7.0 | 7.2 | 67 |
| 24 | 50 | 17 | 7.0 | 5.4 | 9.0 | 13 | 7.3 | 5.7 | 8.6 | 8.8 | 7.1 | 37 |
| 25 | 12 | 17 | 6.4 | 5.0 | 10 | 13 | 10 | 5.6 | 4.4 | 46 | 7.2 | 96 |
| 26 | 4.8 | 23 | 6.2 | 4.8 | 9.0 | 28 | 53 | 5.7 | 4.2 | 8.8 | 96 | 90 |
| 27 | 3.8 | 18 | 6.0 | 4.6 | 8.0 | 16 | 12 | 20 | 153 | 6.7 | 32 | 83 |
| 28 | 3.8 | 15 | 6.0 | 4.5 | 7.6 | 13 | 9.2 | 6.4 | 24 | 49 | 13 | 62 |
| 29 | 4.1 | 13 | 6.0 | 4.4 | --- | 12 | 8.5 | 5.0 | 9.5 | 10 | 9.3 | 256 |
| 30 | 3.8 | 15 | 6.4 | 4.3 | --- | 11 | 14 | 4.8 | 7.5 | 7.8 | 7.1 | 152 |
| 31 | 8.0 | --- | 6.0 | 4.3 | --- | 11 | --- | 4.7 | --- | 15 | 6.7 | --- |
| TOTAL | 374.8 | 1264.5 | 684.4 | 198.5 | 488.3 | 1059.0 | 366.6 | 273.1 | 370.1 | 507.8 | 792.3 | 1680.4 |
| MEAN | 12.1 | 42.2 | 22.1 | 6.40 | 17.4 | 34.2 | 12.2 | 8.81 | 12.3 | 16.4 | 25.6 | 56.0 |
| MAX | 61 | 160 | 210 | 15 | 121 | 250 | 53 | 38 | 153 | 51 | 244 | 296 |
| MIN | 2.8 | 7.5 | 6.0 | 4.3 | 4.9 | 7.0 | 7.1 | 4.7 | 3.6 | 5.1 | 6.7 | 5.5 |
| CFSM | .67 | 2.32 | 1.21 | .35 | .96 | 1.88 | .67 | .48 | .68 | .90 | 1.41 | 3.08 |
| IN. | .77 | 2.58 | 1.40 | .41 | 1.00 | 2.16 | .75 | .56 | .76 | 1.04 | 1.62 | 3.43 |

CAL YR 1985 TOTAL 6082.8 MEAN 16.7 MAX 210 MIN 2.8 CFSM .92 IN 12.43
WTR YR 1986 TOTAL 8059.8 MEAN 22.1 MAX 296 MIN 2.8 CFSM 1.21 IN 16.47

## 04087120 MENOMONEE RIVER AT WAUWATOSA, WI

LOCATION.--Lat 43°02'44", long 87°59'59", in NE 1/4 NW 1/4 sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near upstream side of 70th Street bridge in Wauwatosa, 800 ft downstream from Honey Creek, and at mile 6.2.

DRAINAGE AREA.--123 mi$^2$.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 630.86 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: June 11 to July 16, July 20 to Aug. 6, and ice period listed in rating tables below. Records good except for estimated daily discharges, which are poor. Low flow affected by three sewage treatment plants upstream. Gage-height telemeter at station.

AVERAGE DISCHARGE.--25 years, 98.2 ft$^3$/s, 10.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft$^3$/s Apr. 21, 1973, gage height, 13.92 ft from rating curve extended above 6,000 ft$^3$/s on basis of slope-area measurement of peak flow; minimum daily, 2.8 ft$^3$/s Jan. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 10 | 1325 | 3,930 | 7.66 | Sept. 11 | 1320 | 5,050 | 9.29 |
| Aug. 6 | 2300 | *10,600 | A *13.13 | Sept. 29 | 0535 | 2,710 | 6.39 |
| Aug. 26 | 1015 | 2,870 | 6.59 | | | | |

A Outside high-water mark.

Minimum daily discharge, 18 ft$^3$/s Oct. 2.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 14 to Feb. 19.)

| Oct. 1 to Aug. 6 (1455) | | | | Aug. 6 (1500) to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 0.6 | 14 | 1.5 | 109 | 0.5 | 19 | 2.5 | 410 |
| 0.7 | 17 | 2.0 | 225 | 0.7 | 36 | 3.0 | 630 |
| 0.9 | 28 | 3.0 | 566 | 1.0 | 71 | 5.0 | 1,740 |
| 1.1 | 46 | 4.0 | 1,040 | 1.5 | 152 | 7.0 | 3,140 |
| 1.3 | 74 | 5.0 | 1,650 | 2.0 | 252 | 9.0 | 4,740 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 802 | 980 | 28 | 80 | 55 | 146 | 65 | 28 | 37 | 50 | 38 |
| 2 | 18 | 1110 | 699 | 33 | 60 | 72 | 113 | 54 | 25 | 34 | 56 | 35 |
| 3 | 19 | 634 | 323 | 31 | 45 | 73 | 161 | 47 | 24 | 31 | 33 | 33 |
| 4 | 225 | 471 | 260 | 28 | 400 | 111 | 139 | 44 | 23 | 28 | 33 | 36 |
| 5 | 85 | 356 | 197 | 26 | 200 | 116 | 145 | 51 | 41 | 24 | 35 | 30 |
| 6 | 39 | 285 | 168 | 25 | 120 | 89 | 118 | 45 | 26 | 110 | 2700 | 24 |
| 7 | 28 | 211 | 146 | 24 | 96 | 53 | 103 | 42 | 85 | 40 | 2160 | 21 |
| 8 | 57 | 158 | 130 | 23 | 90 | 64 | 93 | 39 | 36 | 160 | 505 | 21 |
| 9 | 299 | 514 | 115 | 23 | 62 | 70 | 82 | 37 | 24 | 30 | 260 | 178 |
| 10 | 174 | 576 | 125 | 22 | 54 | 1290 | 73 | 34 | 109 | 50 | 207 | 743 |
| 11 | 76 | 388 | 112 | 23 | 50 | 804 | 68 | 37 | 54 | 60 | 132 | 3310 |
| 12 | 361 | 417 | 92 | 26 | 46 | 557 | 59 | 65 | 43 | 150 | 102 | 1320 |
| 13 | 193 | 492 | 73 | 35 | 43 | 850 | 55 | 41 | 35 | 120 | 83 | 974 |
| 14 | 123 | 515 | 66 | 25 | 40 | 726 | 199 | 38 | 50 | 90 | 139 | 705 |
| 15 | 88 | 392 | 60 | 25 | 38 | 598 | 148 | 97 | 26 | 500 | 81 | 446 |
| 16 | 64 | 605 | 54 | 27 | 36 | 568 | 121 | 79 | 23 | 250 | 65 | 253 |
| 17 | 52 | 424 | 47 | 120 | 37 | 595 | 95 | 194 | 21 | 119 | 52 | 203 |
| 18 | 98 | 904 | 42 | 110 | 39 | 788 | 80 | 187 | 20 | 68 | 45 | 179 |
| 19 | 212 | 818 | 40 | 74 | 200 | 893 | 68 | 98 | 19 | 66 | 41 | 132 |
| 20 | 96 | 617 | 38 | 68 | 149 | 647 | 72 | 68 | 19 | 150 | 38 | 109 |
| 21 | 76 | 421 | 35 | 60 | 105 | 472 | 104 | 53 | 20 | 60 | 36 | 103 |
| 22 | 65 | 320 | 34 | 52 | 91 | 321 | 65 | 46 | 60 | 40 | 32 | 417 |
| 23 | 148 | 220 | 35 | 45 | 65 | 262 | 56 | 44 | 100 | 30 | 29 | 579 |
| 24 | 454 | 167 | 32 | 40 | 65 | 236 | 52 | 40 | 60 | 30 | 25 | 307 |
| 25 | 262 | 146 | 29 | 37 | 62 | 220 | 56 | 37 | 35 | 150 | 25 | 1110 |
| 26 | 198 | 173 | 28 | 35 | 58 | 354 | 350 | 34 | 150 | 45 | 687 | 1110 |
| 27 | 136 | 155 | 27 | 34 | 57 | 280 | 148 | 112 | 500 | 30 | 226 | 1090 |
| 28 | 99 | 134 | 26 | 33 | 45 | 223 | 104 | 51 | 90 | 200 | 127 | 754 |
| 29 | 80 | 118 | 26 | 32 | --- | 183 | 78 | 39 | 54 | 45 | 81 | 1530 |
| 30 | 67 | 123 | 28 | 31 | --- | 156 | 94 | 35 | 45 | 33 | 58 | 1080 |
| 31 | 87 | --- | 30 | 30 | --- | 131 | --- | 32 | --- | 70 | 46 | --- |
| TOTAL | 3999 | 12666 | 4097 | 1225 | 2433 | 11857 | 3245 | 1885 | 1845 | 2850 | 8189 | 16870 |
| MEAN | 129 | 422 | 132 | 39.5 | 86.9 | 382 | 108 | 60.8 | 61.5 | 91.9 | 264 | 562 |
| MAX | 454 | 1110 | 980 | 120 | 400 | 1290 | 350 | 194 | 500 | 500 | 2700 | 3310 |
| MIN | 18 | 118 | 26 | 22 | 36 | 53 | 52 | 32 | 19 | 24 | 25 | 21 |
| CFSM | 1.05 | 3.43 | 1.07 | .32 | .71 | 3.11 | .88 | .49 | .50 | .75 | 2.15 | 4.57 |
| IN. | 1.21 | 3.83 | 1.24 | .37 | .74 | 3.59 | .98 | .57 | .56 | .86 | 2.48 | 5.10 |

CAL YR 1985 TOTAL 49230 MEAN 135 MAX 1110 MIN 13 CFSM 1.10 IN 14.89
WTR YR 1986 TOTAL 71161 MEAN 195 MAX 3310 MIN 18 CFSM 1.59 IN 21.52

### 04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI

**LOCATION.**--Lat 42°59'51", long 87°55'35", in SW 1/4 NW 1/4 sec.8, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 150 ft upstream from footbridge on South 11th Street, 3.2 mi upstream from mouth, at Milwaukee.

**DRAINAGE AREA.**--20.2 mi$^2$.

**PERIOD OF RECORD.**--October 1982 to current year. Low-flow records equivalent to records for Kinnickinnic River at Milwaukee, WI (04087160) September 1976 to January 1983 (discontinued). Discontinued gage was located 0.3 mi downstream from present gage.

**GAGE.**--Water-stage recorder and steel plate weir. Elevation of gage is 590 ft from river-profile map.

**REMARKS.**--Estimated daily discharge: None, except for ice periods listed in rating table below. Records are good except for the ice-affected periods, which are fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 10,600 ft$^3$/s Aug. 6, 1986, from rating curve extended above 600 ft$^3$/s on basis of step-backwater analysis at peak gage height, gage height, 14.41 ft from inside gage, 16.01 ft, from floodmarks; minimum discharge, 1.3 ft$^3$/s Jan. 26 and 27, 1986, gage height, 5.80 ft, result of freezeup.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 10,600 ft$^3$/s Aug. 6, gage height, 14.41 ft from inside gage, 16.01 ft, from floodmarks; minimum discharge, 1.3 ft$^3$/s Jan. 26 and 27, gage height, 5.80 ft, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 14 to Jan. 16, Jan. 26 to Feb. 1, and Feb. 8-18.)

| | | | |
|---|---|---|---|
| 6.0 | 4.2 | 6.9 | 68 |
| 6.2 | 9.4 | 7.4 | 156 |
| 6.4 | 19 | 8.1 | 348 |
| 6.6 | 33 | 9.0 | 736 |
| | | 10.3 | 1,630 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.3 | 389 | 449 | 6.2 | 50 | 11 | 28 | 13 | 7.7 | 8.0 | 9.6 | 8.3 |
| 2 | 6.3 | 148 | 43 | 8.8 | 13 | 19 | 10 | 11 | 7.0 | 8.0 | 11 | 9.6 |
| 3 | 7.5 | 26 | 24 | 11 | 9.7 | 16 | 31 | 9.9 | 7.5 | 7.5 | 7.7 | 10 |
| 4 | 101 | 20 | 19 | 7.4 | 473 | 44 | 11 | 9.7 | 8.3 | 7.2 | 8.3 | 9.9 |
| 5 | 14 | 12 | 16 | 6.8 | 57 | 26 | 18 | 13 | 23 | 7.9 | 9.4 | 9.4 |
| 6 | 6.9 | 31 | 16 | 6.4 | 17 | 16 | 9.4 | 13 | 9.4 | 256 | 1630 | 10 |
| 7 | 7.0 | 20 | 13 | 6.2 | 12 | 11 | 9.5 | 11 | 7.5 | 63 | 207 | 8.2 |
| 8 | 45 | 14 | 12 | 6.0 | 11 | 7.4 | 10 | 11 | 7.7 | 67 | 47 | 8.6 |
| 9 | 204 | 263 | 12 | 6.0 | 9.0 | 23 | 8.6 | 10 | 7.9 | 14 | 22 | 111 |
| 10 | 57 | 83 | 23 | 5.8 | 8.0 | 494 | 8.0 | 9.3 | 57 | 27 | 33 | 419 |
| 11 | 14 | 24 | 15 | 5.6 | 7.6 | 49 | 7.8 | 10 | 46 | 60 | 15 | 338 |
| 12 | 106 | 59 | 12 | 5.6 | 7.0 | 19 | 6.5 | 20 | 35 | 146 | 14 | 33 |
| 13 | 24 | 46 | 9.9 | 7.8 | 6.6 | 119 | 6.1 | 11 | 11 | 29 | 13 | 17 |
| 14 | 12 | 43 | 9.4 | 6.0 | 6.2 | 43 | 67 | 11 | 30 | 14 | 47 | 13 |
| 15 | 10 | 23 | 8.8 | 5.8 | 6.2 | 26 | 15 | 59 | 12 | 254 | 14 | 12 |
| 16 | 8.9 | 168 | 8.4 | 6.0 | 6.4 | 26 | 14 | 17 | 9.5 | 58 | 12 | 11 |
| 17 | 8.4 | 28 | 8.0 | 31 | 6.8 | 22 | 10 | 116 | 8.5 | 19 | 11 | 25 |
| 18 | 31 | 304 | 7.6 | 50 | 8.0 | 68 | 8.4 | 32 | 8.4 | 15 | 9.5 | 14 |
| 19 | 55 | 100 | 7.4 | 16 | 129 | 34 | 7.5 | 13 | 10 | 35 | 9.8 | 13 |
| 20 | 14 | 41 | 7.0 | 8.3 | 29 | 14 | 13 | 11 | 8.1 | 15 | 9.8 | 9.6 |
| 21 | 9.1 | 20 | 6.8 | 14 | 23 | 12 | 18 | 11 | 7.5 | 10 | 9.7 | 14 |
| 22 | 8.1 | 31 | 6.6 | 16 | 13 | 11 | 7.9 | 10 | 23 | 10 | 9.4 | 120 |
| 23 | 60 | 17 | 7.8 | 8.8 | 8.1 | 12 | 7.7 | 10 | 27 | 10 | 12 | 73 |
| 24 | 84 | 14 | 7.0 | 7.6 | 11 | 11 | 8.1 | 8.5 | 18 | 11 | 7.3 | 41 |
| 25 | 11 | 16 | 6.4 | 7.3 | 13 | 12 | 11 | 7.8 | 7.9 | 214 | 9.0 | 242 |
| 26 | 11 | 29 | 6.2 | 7.0 | 11 | 58 | 102 | 8.1 | 7.9 | 14 | 304 | 69 |
| 27 | 9.2 | 12 | 6.0 | 6.8 | 10 | 15 | 9.2 | 76 | 467 | 13 | 23 | 26 |
| 28 | 7.8 | 14 | 6.0 | 6.6 | 9.5 | 13 | 9.5 | 12 | 17 | 116 | 11 | 58 |
| 29 | 8.0 | 13 | 6.4 | 6.4 | --- | 12 | 9.3 | 9.5 | 9.8 | 14 | 9.7 | 248 |
| 30 | 7.2 | 26 | 7.6 | 6.2 | --- | 11 | 33 | 9.2 | 8.9 | 12 | 8.4 | 71 |
| 31 | 26 | --- | 6.6 | 6.0 | --- | 10 | --- | 8.6 | --- | 13 | 8.1 | --- |
| TOTAL | 979.7 | 2034 | 793.9 | 305.4 | 971.1 | 1264.4 | 514.5 | 581.6 | 915.5 | 1547.6 | 2551.7 | 2051.6 |
| MEAN | 31.6 | 67.8 | 25.6 | 9.85 | 34.7 | 40.8 | 17.2 | 18.8 | 30.5 | 49.9 | 82.3 | 68.4 |
| MAX | 204 | 389 | 449 | 50 | 473 | 494 | 102 | 116 | 467 | 256 | 1630 | 419 |
| MIN | 6.3 | 12 | 6.0 | 5.6 | 6.2 | 7.4 | 6.1 | 7.8 | 7.0 | 7.2 | 7.3 | 8.2 |
| CFSM | 1.56 | 3.36 | 1.27 | .49 | 1.72 | 2.02 | .85 | .93 | 1.51 | 2.47 | 4.07 | 3.39 |
| IN. | 1.80 | 3.75 | 1.46 | .56 | 1.79 | 2.33 | .95 | 1.07 | 1.69 | 2.85 | 4.70 | 3.78 |

CAL YR 1985 TOTAL 9121.6 MEAN 25.0 MAX 449 MIN 5.5 CFSM 1.24 IN 16.80
WTR YR 1986 TOTAL 14511.0 MEAN 39.8 MAX 1630 MIN 5.6 CFSM 1.97 IN 26.72

## 04087204 OAK CREEK AT SOUTH MILWAUKEE, WI

**LOCATION.**--Lat 42°55'30", long 87°52'12", in NW 1/4 sec.2, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 25 ft downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi upstream from mouth.

**DRAINAGE AREA.**--25.0 mi$^2$.

**PERIOD OF RECORD.**--October 1963 to current year.

**REVISED RECORDS.**--WDR WI-80-1: 1979 (average discharge).

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 631.40 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except for ice-affected periods, which are fair. Low flows may occasionally be affected by construction and activity at gravel pit upstream.

**AVERAGE DISCHARGE.**--23 years, 22.6 ft$^3$/s, 12.28 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 1,140 ft$^3$/s Aug. 6, 1986, gage height, 9.88 ft; no flow Jan. 8-13, 15-18, 27-31, Feb. 6-8, 1977.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 350 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 0415 | 410 | 6.76 | Aug. 6 | 1730 | *1,140 | *9.88 |
| Dec. 1 | 1430 | 483 | 7.18 | Sept. 11 | 1145 | 415 | 6.79 |
| Feb. 5 | 0200 | 408 | 6.75 | Sept. 29 | 1645 | 431 | 6.89 |
| Mar. 10 | 1245 | 527 | 7.41 | | | | |

Minimum discharge, 1.1 ft$^3$/s part of each day Oct. 2, 3, gage height, 2.28 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 25-31, Jan. 4-14, 27-29, and Feb. 11-15.)

| | | | |
|---|---|---|---|
| 2.3 | 1.6 | 4.0 | 110 |
| 2 35 | 2.4 | 5.0 | 194 |
| 2.4 | 3.8 | 6.0 | 303 |
| 2.5 | 8.3 | 7.0 | 450 |
| 2.6 | 13 | 8.0 | 649 |
| 3.0 | 37 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.2 | 131 | 315 | 4.8 | 13 | 14 | 18 | 13 | 6.6 | 16 | 9.9 | 4.4 |
| 2 | 2.2 | 324 | 252 | 4.6 | 17 | 13 | 17 | 8.1 | 5.4 | 13 | 9.7 | 3.8 |
| 3 | 1.8 | 112 | 89 | 4.6 | 13 | 14 | 17 | 6.8 | 4.7 | 9.9 | 7.2 | 3.1 |
| 4 | 14 | 45 | 50 | 4.5 | 206 | 24 | 18 | 6.6 | 4.4 | 7.6 | 5.6 | 2.9 |
| 5 | 18 | 29 | 37 | 4.5 | 243 | 42 | 17 | 7.7 | 19 | 6.0 | 4.5 | 2.6 |
| 6 | 6.4 | 25 | 29 | 4.4 | 70 | 32 | 16 | 8.7 | 13 | 16 | 491 | 2.1 |
| 7 | 4.2 | 29 | 25 | 4.4 | 44 | 22 | 15 | 9.0 | 8.0 | 88 | 518 | 1.8 |
| 8 | 12 | 20 | 22 | 4.3 | 33 | 16 | 14 | 9.2 | 6.1 | 81 | 169 | 1.8 |
| 9 | 64 | 120 | 17 | 4.3 | 21 | 18 | 13 | 9.8 | 4.3 | 38 | 54 | 18 |
| 10 | 101 | 227 | 20 | 4.4 | 17 | 382 | 11 | 10 | 23 | 21 | 31 | 203 |
| 11 | 25 | 73 | 26 | 4.5 | 14 | 258 | 10 | 11 | 35 | 22 | 20 | 334 |
| 12 | 57 | 54 | 21 | 4.6 | 12 | 126 | 8.9 | 13 | 19 | 44 | 15 | 162 |
| 13 | 54 | 73 | 15 | 4.6 | 10 | 204 | 7.8 | 12 | 15 | 92 | 12 | 48 |
| 14 | 18 | 67 | 14 | 4.6 | 9.6 | 158 | 16 | 10 | 14 | 29 | 20 | 25 |
| 15 | 14 | 45 | 13 | 4.6 | 9.0 | 107 | 24 | 15 | 21 | 49 | 22 | 19 |
| 16 | 9.3 | 172 | 12 | 4.7 | 8.6 | 90 | 17 | 23 | 15 | 147 | 27 | 14 |
| 17 | 7.5 | 94 | 12 | 6.0 | 8.1 | 85 | 14 | 39 | 9.4 | 39 | 14 | 13 |
| 18 | 9.3 | 210 | 10 | 21 | 8.5 | 118 | 12 | 83 | 7.1 | 21 | 12 | 13 |
| 19 | 34 | 230 | 9.5 | 29 | 41 | 132 | 10 | 26 | 6.8 | 25 | 11 | 11 |
| 20 | 21 | 162 | 8.4 | 15 | 51 | 49 | 9.1 | 17 | 7.0 | 24 | 10 | 11 |
| 21 | 15 | 62 | 7.7 | 15 | 23 | 29 | 11 | 13 | 5.0 | 17 | 8.7 | 11 |
| 22 | 11 | 44 | 7.3 | 21 | 23 | 24 | 11 | 9.6 | 8.1 | 17 | 7.5 | 24 |
| 23 | 15 | 36 | 7.0 | 16 | 15 | 25 | 8.6 | 7.6 | 9.7 | 15 | 6.8 | 57 |
| 24 | 81 | 27 | 7.0 | 15 | 15 | 24 | 7.3 | 6.7 | 14 | 14 | 5.7 | 35 |
| 25 | 29 | 22 | 6.6 | 14 | 15 | 22 | 7.0 | 5.4 | 7.1 | 126 | 5.0 | 285 |
| 26 | 15 | 31 | 6.0 | 12 | 15 | 47 | 7.9 | 5.1 | 4.2 | 48 | 54 | 136 |
| 27 | 11 | 30 | 5.0 | 10 | 14 | 34 | 8.3 | 51 | 217 | 20 | 45 | 82 |
| 28 | 8.7 | 23 | 4.8 | 8.0 | 14 | 23 | 6.5 | 47 | 103 | 38 | 15 | 66 |
| 29 | 7.2 | 20 | 4.7 | 6.6 | --- | 20 | 6.3 | 18 | 24 | 23 | 10 | 321 |
| 30 | 6.6 | 23 | 5.0 | 5.8 | --- | 18 | 18 | 12 | 18 | 15 | 7.9 | 242 |
| 31 | 9.2 | --- | 5.2 | 5.1 | --- | 17 | --- | 8.5 | --- | 12 | 6.0 | --- |
| TOTAL | 683.6 | 2560 | 1063.2 | 271.9 | 982.8 | 2187 | 376.7 | 521.8 | 653.9 | 1133.5 | 1634.5 | 2152.5 |
| MEAN | 22.1 | 85.3 | 34.3 | 8.77 | 35.1 | 70.5 | 12.6 | 16.8 | 21.8 | 36.6 | 52.7 | 71.8 |
| MAX | 101 | 324 | 315 | 29 | 243 | 382 | 24 | 83 | 217 | 147 | 518 | 334 |
| MIN | 1.8 | 20 | 4.7 | 4.3 | 8.1 | 13 | 6.3 | 5.1 | 4.2 | 6.0 | 4.5 | 1.8 |
| CFSM | .88 | 3.41 | 1.37 | .35 | 1.40 | 2.82 | .50 | .67 | .87 | 1.46 | 2.11 | 2.87 |
| IN. | 1.02 | 3.81 | 1.58 | .40 | 1.46 | 3.25 | .56 | .78 | .97 | 1.69 | 2.43 | 3.20 |

CAL YR 1985 TOTAL 10159.4 MEAN 27.8 MAX 324 MIN 1.1 CFSM 1.11 IN 15.12
WTR YR 1986 TOTAL 14221.4 MEAN 39.0 MAX 518 MIN 1.8 CFSM 1.56 IN 21.16

## 04087220 ROOT RIVER NEAR FRANKLIN, WI

LOCATION.--Lat 42°52'25", long 87°59'45", in SE 1/4 sec.22, T.5 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on right bank 400 ft upstream from State Highway 100, 2.1 mi upstream from Root River Canal, 2.4 mi southeast of Franklin, 5.5 mi southeast of Hales Corners, and about 24 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi$^2$.

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORD.--WDR WI-81-1: Drainage area. WDR WI-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records good except for ice-affected periods, which are fair. Flow affected by urbanization in the drainage basin.

AVERAGE DISCHARGE.--23 years, 45.4 ft$^3$/s, 12.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft$^3$/s Apr. 21, 1973, gage height, 9.31 ft; minimum, 0.38 ft$^3$/s Aug. 10, 1971, gage height, 1.45 ft.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Mar. 30, 1960, reached a stage of 9.57 ft, discharge, 5,130 ft$^3$/s, from rating curve extended above 2,000 ft$^3$/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft$^3$/s, revised, and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 1300 | 579 | 7.53 | Feb. 5 | 0945 | 621 | 7.85 |
| Dec. 2 | 0445 | 639 | 7.71 | Mar. 11 | 0130 | *708 | *8.10 |

Minimum discharge, 3.4 ft$^3$/s Oct. 3, gage height, 1.74 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Feb. 5-8, Mar. 10-20, 26, May 18, June 27-28, July 6-9, 11-18, 25, 26, 28, 29, Aug. 6-8, 26, 27, Sept. 10-13, 22-30; stage-discharge relation affected by ice Dec. 12 to Feb. 4, Feb. 9 to Mar. 9.)

| | | | |
|---|---|---|---|
| 1.7 | 3.5 | 4.0 | 112 |
| 1.8 | 5.5 | 5.0 | 169 |
| 1.9 | 8.5 | 6.0 | 270 |
| 2.0 | 12 | 7.0 | 444 |
| 2.5 | 47 | 8.0 | 740 |
| 3.0 | 69 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.1 | 151 | 322 | 9.2 | 15 | 38 | 52 | 36 | 11 | 31 | 16 | 9.5 |
| 2 | 3.9 | 536 | 582 | 8.6 | 40 | 38 | 52 | 24 | 9.3 | 21 | 13 | 8.6 |
| 3 | 3.7 | 355 | 316 | 8.4 | 24 | 40 | 49 | 20 | 8.5 | 16 | 11 | 9.5 |
| 4 | 18 | 110 | 160 | 8.2 | 120 | 45 | 62 | 19 | 8.5 | 12 | 10 | 7.4 |
| 5 | 50 | 74 | 89 | 8.0 | 555 | 80 | 53 | 20 | 13 | 11 | 11 | 6.3 |
| 6 | 12 | 63 | 65 | 7.8 | 264 | 66 | 50 | 20 | 12 | 21 | 51 | 5.5 |
| 7 | 7.4 | 97 | 53 | 7.6 | 196 | 54 | 47 | 19 | 9.7 | 206 | 240 | 5.3 |
| 8 | 9.6 | 73 | 48 | 7.4 | 141 | 46 | 44 | 16 | 8.9 | 100 | 70 | 5.1 |
| 9 | 74 | 137 | 43 | 7.2 | 110 | 44 | 37 | 16 | 8.5 | 73 | 35 | 6.7 |
| 10 | 199 | 368 | 44 | 7.0 | 70 | 485 | 35 | 16 | 10 | 47 | 23 | 214 |
| 11 | 58 | 157 | 42 | 7.0 | 50 | 629 | 48 | 16 | 38 | 76 | 28 | 417 |
| 12 | 66 | 109 | 35 | 7.0 | 29 | 390 | 26 | 17 | 37 | 166 | 18 | 275 |
| 13 | 91 | 135 | 29 | 7.0 | 24 | 324 | 21 | 17 | 26 | 292 | 14 | 82 |
| 14 | 37 | 119 | 24 | 7.2 | 22 | 414 | 32 | 16 | 12 | 93 | 24 | 55 |
| 15 | 19 | 88 | 20 | 7.4 | 20 | 255 | 76 | 16 | 26 | 88 | 43 | 46 |
| 16 | 13 | 214 | 19 | 7.8 | 19 | 182 | 51 | 48 | 16 | 330 | 27 | 37 |
| 17 | 11 | 161 | 18 | 12 | 18 | 206 | 30 | 30 | 12 | 139 | 14 | 30 |
| 18 | 11 | 308 | 17 | 30 | 17 | 224 | 22 | 99 | 9.5 | 68 | 11 | 45 |
| 19 | 53 | 414 | 16 | 50 | 60 | 273 | 21 | 46 | 8.3 | 50 | 11 | 35 |
| 20 | 44 | 246 | 15 | 40 | 130 | 146 | 18 | 24 | 8.1 | 56 | 9.5 | 31 |
| 21 | 20 | 123 | 14 | 30 | 80 | 92 | 19 | 19 | 7.9 | 30 | 9.5 | 29 |
| 22 | 15 | 79 | 14 | 35 | 60 | 75 | 20 | 15 | 8.0 | 21 | 8.1 | 63 |
| 23 | 13 | 70 | 13 | 40 | 45 | 74 | 17 | 14 | 11 | 19 | 7.4 | 173 |
| 24 | 120 | 55 | 13 | 28 | 42 | 69 | 17 | 13 | 18 | 14 | 6.6 | 116 |
| 25 | 62 | 50 | 12 | 24 | 40 | 67 | 15 | 12 | 12 | 114 | 5.9 | 331 |
| 26 | 23 | 61 | 12 | 20 | 43 | 100 | 66 | 11 | 8.8 | 71 | 53 | 309 |
| 27 | 16 | 56 | 12 | 16 | 42 | 95 | 52 | 44 | 225 | 32 | 126 | 178 |
| 28 | 13 | 44 | 11 | 14 | 40 | 70 | 30 | 63 | 290 | 89 | 35 | 109 |
| 29 | 10 | 37 | 11 | 12 | --- | 63 | 23 | 28 | 71 | 62 | 18 | 251 |
| 30 | 10 | 32 | 10 | 10 | --- | 57 | 39 | 17 | 41 | 31 | 13 | 413 |
| 31 | 8.8 | --- | 9.6 | 9.0 | --- | 53 | --- | 13 | --- | 18 | 11 | --- |
| TOTAL | 1096.5 | 4522 | 2088.6 | 492.8 | 2316 | 4794 | 1124 | 784 | 985.0 | 2397 | 973.0 | 3302.9 |
| MEAN | 35.4 | 151 | 67.4 | 15.9 | 82.7 | 155 | 37.5 | 25.3 | 32.8 | 77.3 | 31.4 | 110 |
| MAX | 199 | 536 | 582 | 50 | 555 | 629 | 76 | 99 | 290 | 330 | 240 | 417 |
| MIN | 3.7 | 32 | 9.6 | 7.0 | 15 | 38 | 15 | 11 | 7.9 | 11 | 5.9 | 5.1 |
| CFSM | .72 | 3.07 | 1.37 | .32 | 1.68 | 3.15 | .76 | .51 | .67 | 1.57 | .64 | 2.24 |
| IN. | .83 | 3.42 | 1.58 | .37 | 1.75 | 3.62 | .85 | .59 | .74 | 1.81 | .74 | 2.50 |

CAL YR 1985 TOTAL 18308.6 MEAN 50.2 MAX 663 MIN 2.6 CFSM 1.02 IN 13.84
WTR YR 1986 TOTAL 24875.8 MEAN 68.2 MAX 629 MIN 3.7 CFSM 1.39 IN 18.81

## 04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI

LOCATION.--Lat 42°48'55", long 87°59'40", in SE 1/4 sec.10, T.4 N., R.21 E., Racine County, Hydrologic Unit 04040002, on right bank 10 ft downstream from highway bridge 3.5 mi upstream from mouth, 5.5 mi southeast of intersection U.S. 45 and State Highway 100 in Franklin, and 8.7 mi southeast of Hales Corners.

DRAINAGE AREA.--57.0 mi$^2$.

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 670 ft, from topographic map.

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records fair.

AVERAGE DISCHARGE.--23 years, 47.8 ft$^3$/s, 11.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft$^3$/s Mar. 4, 1974, gage height, 9.88 ft; minimum daily, 0.40 ft$^3$/s Dec. 19, 1963, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 20 | 0245 | 537 | 8.26 | Mar. 13 | 2215 | 503 | 8.09 |
| Dec. 2 | 0200 | 697 | 8.89 | Sept. 26 | 0100 | 905 | 9.49 |
| Feb. 5 | 0845 | 697 | 8.89 | Sept. 30 | 0500 | 1,080 | 9.89 |
| Mar. 10 | 1900 | *1,120 | *9.97 | | | | |

Minimum discharge, 1.7 ft$^3$/s Oct. 2, 3, gage height, 1.94 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13 to Feb. 3, Feb. 9 to Mar. 3, and Mar. 7-9.)

| | | | |
|---|---|---|---|
| 1.9 | 1.3 | 5.0 | 162 |
| 2.0 | 2.6 | 6.0 | 236 |
| 2.1 | 4.9 | 7.0 | 337 |
| 2.3 | 12 | 8.0 | 485 |
| 3.0 | 47 | 9.0 | 730 |
| 4.0 | 101 | 10.0 | 1,140 |

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 35 | 334 | 10 | 20 | 22 | 42 | 16 | 39 | 60 | 11 | 4.9 |
| 2 | 2.0 | 333 | 615 | 10 | 64 | 21 | 37 | 12 | 30 | 46 | 8.6 | 4.1 |
| 3 | 1.9 | 247 | 304 | 10 | 46 | 18 | 35 | 11 | 25 | 34 | 6.8 | 3.9 |
| 4 | 3.8 | 128 | 151 | 9.8 | 229 | 26 | 35 | 10 | 22 | 28 | 5.5 | 3.8 |
| 5 | 7.9 | 84 | 107 | 9.6 | 633 | 60 | 33 | 9.9 | 38 | 23 | 5.1 | 3.2 |
| 6 | 4.5 | 63 | 80 | 9.2 | 327 | 71 | 32 | 9.7 | 45 | 18 | 22 | 3.1 |
| 7 | 4.4 | 62 | 65 | 9.0 | 191 | 50 | 28 | 8.5 | 35 | 24 | 77 | 2.7 |
| 8 | 7.2 | 50 | 55 | 8.6 | 136 | 38 | 25 | 7.9 | 28 | 135 | 41 | 2.4 |
| 9 | 13 | 63 | 47 | 8.4 | 90 | 39 | 23 | 7.3 | 22 | 168 | 26 | 3.3 |
| 10 | 24 | 273 | 44 | 8.4 | 60 | 847 | 21 | 6.9 | 22 | 94 | 19 | 33 |
| 11 | 12 | 178 | 47 | 8.2 | 35 | 940 | 19 | 6.6 | 24 | 85 | 14 | 123 |
| 12 | 13 | 114 | 45 | 8.2 | 27 | 511 | 17 | 8.2 | 21 | 131 | 11 | 148 |
| 13 | 20 | 123 | 40 | 8.2 | 23 | 409 | 16 | 7.3 | 18 | 104 | 8.5 | 65 |
| 14 | 8.9 | 130 | 33 | 8.4 | 20 | 390 | 19 | 6.3 | 16 | 60 | 9.9 | 40 |
| 15 | 5.8 | 108 | 30 | 8.6 | 19 | 259 | 30 | 6.2 | 32 | 44 | 12 | 30 |
| 16 | 4.8 | 220 | 27 | 8.8 | 18 | 217 | 28 | 15 | 28 | 87 | 8.4 | 23 |
| 17 | 4.0 | 236 | 26 | 10 | 17 | 208 | 25 | 22 | 20 | 56 | 6.4 | 19 |
| 18 | 4.3 | 274 | 23 | 20 | 16 | 243 | 23 | 142 | 17 | 36 | 5.3 | 18 |
| 19 | 35 | 479 | 21 | 70 | 30 | 301 | 21 | 89 | 15 | 28 | 4.6 | 16 |
| 20 | 33 | 477 | 19 | 52 | 130 | 163 | 19 | 55 | 14 | 23 | 4.0 | 14 |
| 21 | 19 | 234 | 17 | 40 | 90 | 115 | 19 | 40 | 12 | 18 | 3.7 | 16 |
| 22 | 13 | 136 | 16 | 42 | 70 | 96 | 16 | 31 | 12 | 15 | 3.3 | 33 |
| 23 | 8.9 | 103 | 15 | 50 | 50 | 87 | 15 | 26 | 11 | 13 | 3.5 | 324 |
| 24 | 16 | 79 | 14 | 40 | 40 | 76 | 15 | 22 | 11 | 11 | 2.8 | 222 |
| 25 | 14 | 63 | 14 | 34 | 35 | 72 | 14 | 18 | 9.7 | 45 | 2.6 | 720 |
| 26 | 9.3 | 63 | 14 | 28 | 34 | 80 | 15 | 16 | 8.1 | 37 | 14 | 858 |
| 27 | 6.5 | 60 | 13 | 20 | 30 | 74 | 15 | 91 | 208 | 25 | 42 | 606 |
| 28 | 4.4 | 53 | 12 | 16 | 23 | 64 | 13 | 233 | 374 | 28 | 19 | 329 |
| 29 | 4.1 | 47 | 12 | 14 | --- | 58 | 12 | 120 | 164 | 23 | 11 | 764 |
| 30 | 3.7 | 44 | 11 | 12 | --- | 51 | 18 | 76 | 87 | 16 | 8.3 | 1040 |
| 31 | 3.9 | --- | 11 | 10 | --- | 45 | --- | 52 | --- | 13 | 6.3 | --- |
| TOTAL | 314.7 | 4559 | 2262 | 601.4 | 2503 | 5651 | 680 | 1181.8 | 1407.8 | 1528 | 422.6 | 5472.4 |
| MEAN | 10.2 | 152 | 73.0 | 19.4 | 89.4 | 182 | 22.7 | 38.1 | 46.9 | 49.3 | 13.6 | 182 |
| MAX | 35 | 479 | 615 | 70 | 633 | 940 | 42 | 233 | 374 | 168 | 77 | 1040 |
| MIN | 1.9 | 35 | 11 | 8.2 | 16 | 18 | 12 | 6.2 | 8.1 | 11 | 2.6 | 2.4 |
| CFSM | .18 | 2.67 | 1.28 | .34 | 1.57 | 3.19 | .40 | .67 | .82 | .87 | .24 | 3.19 |
| IN. | .21 | 2.98 | 1.48 | .39 | 1.63 | 3.69 | .44 | .77 | .92 | 1.00 | .28 | 3.57 |

CAL YR 1985 TOTAL 18904.6 MEAN 51.8 MAX 899 MIN 1.3 CFSM .91 IN 12.34
WTR YR 1986 TOTAL 26583.7 MEAN 72.8 MAX 1040 MIN 1.9 CFSM 1.28 IN 17.35

## 04087240 ROOT RIVER AT RACINE, WI

LOCATION.--Lat 42°45'05", long 87°49'25", in NE 1/4 sec.6, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 30 ft downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 mi upstream from mouth.

DRAINAGE AREA.--190 mi$^2$, of which 1.24 mi$^2$ is probably noncontributing.

PERIOD OF RECORD.--August 1963 to current year.

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 610 ft, from topographic map. Prior to Feb. 5, 1964, nonrecording gage on bridge 30 ft upstream.

REMARKS.--Estimated daily discharge: Nov. 23 to Dec. 17, Feb. 8-20, and ice-affected periods listed in rating table below. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--23 years, 155 ft$^3$/s, 11.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft$^3$/s Mar. 5, 1974, gage height, 8.54 ft; minimum, 0.90 ft$^3$/s Jan. 17, 1977; minimum daily, 1.0 ft$^3$/s July 17, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft$^3$/s, and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 20 | 0315 | 1,130 | 4.83 | Sept. 25 | 0915 | 1,360 | 5.06 |
| Dec. 3 | ---- | A 1,400 | ---- | Sept. 29 | 2130 | 1,430 | 5.15 |
| Mar. 11 | 2330 | *2,140 | *5.69 | | | | |

A Estimated, daily mean discharge.

Minimum daily, 3.8 ft$^3$/s Oct. 3.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Mar. 11-16; stage-discharge relation affected by ice Dec. 22-29 and Feb. 28.)

| | | | |
|---|---|---|---|
| 2.1 | 3.0 | 2.9 | 92 |
| 2.2 | 6.0 | 3.4 | 260 |
| 2.3 | 11 | 4.0 | 575 |
| 2.5 | 26 | 6.0 | 2,130 |
| 2.7 | 49 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.5 | 57 | 250 | 34 | 44 | 62 | 158 | 97 | 97 | 220 | 49 | 29 |
| 2 | 4.0 | 396 | 700 | 34 | 72 | 62 | 145 | 93 | 66 | 155 | 41 | 25 |
| 3 | 3.8 | 596 | 1400 | 33 | 127 | 61 | 135 | 75 | 54 | 113 | 34 | 24 |
| 4 | 5.9 | 811 | 1000 | 33 | 263 | 75 | 135 | 62 | 48 | 82 | 28 | 22 |
| 5 | 7.5 | 548 | 600 | 33 | 645 | 134 | 144 | 63 | 58 | 61 | 25 | 20 |
| 6 | 25 | 256 | 400 | 33 | 708 | 213 | 136 | 64 | 75 | 49 | 74 | 17 |
| 7 | 27 | 202 | 250 | 33 | 804 | 215 | 124 | 63 | 83 | 77 | 260 | 15 |
| 8 | 21 | 211 | 200 | 31 | 580 | 152 | 109 | 59 | 63 | 311 | 358 | 14 |
| 9 | 19 | 200 | 170 | 29 | 450 | 134 | 95 | 53 | 51 | 385 | 208 | 14 |
| 10 | 88 | 464 | 140 | 28 | 280 | 860 | 85 | 48 | 49 | 332 | 113 | 62 |
| 11 | 173 | 593 | 120 | 28 | 150 | 1570 | 84 | 43 | 58 | 217 | 77 | 438 |
| 12 | 88 | 613 | 110 | 30 | 110 | 2060 | 90 | 39 | 76 | 460 | 64 | 642 |
| 13 | 92 | 446 | 100 | 30 | 90 | 1880 | 69 | 36 | 72 | 476 | 50 | 685 |
| 14 | 108 | 424 | 90 | 29 | 78 | 1390 | 67 | 35 | 62 | 484 | 44 | 431 |
| 15 | 54 | 403 | 80 | 28 | 70 | 1320 | 107 | 31 | 60 | 361 | 47 | 182 |
| 16 | 36 | 430 | 74 | 28 | 66 | 1050 | 153 | 33 | 85 | 299 | 56 | 128 |
| 17 | 26 | 549 | 68 | 28 | 64 | 873 | 118 | 73 | 66 | 442 | 46 | 99 |
| 18 | 24 | 701 | 66 | 37 | 62 | 808 | 92 | 181 | 51 | 387 | 32 | 82 |
| 19 | 43 | 870 | 62 | 79 | 80 | 862 | 80 | 288 | 44 | 187 | 25 | 84 |
| 20 | 82 | 1120 | 56 | 132 | 150 | 854 | 73 | 171 | 40 | 143 | 23 | 69 |
| 21 | 87 | 994 | 53 | 139 | 228 | 609 | 67 | 114 | 37 | 108 | 22 | 63 |
| 22 | 53 | 727 | 50 | 132 | 190 | 392 | 64 | 82 | 38 | 69 | 21 | 86 |
| 23 | 39 | 450 | 49 | 146 | 155 | 324 | 64 | 62 | 39 | 56 | 21 | 273 |
| 24 | 39 | 350 | 48 | 141 | 115 | 291 | 61 | 56 | 45 | 47 | 19 | 461 |
| 25 | 129 | 280 | 45 | 113 | 91 | 259 | 60 | 47 | 46 | 134 | 17 | 1100 |
| 26 | 82 | 230 | 43 | 90 | 82 | 265 | 64 | 43 | 43 | 264 | 27 | 1020 |
| 27 | 47 | 200 | 41 | 67 | 78 | 322 | 111 | 75 | 136 | 155 | 138 | 1190 |
| 28 | 37 | 180 | 38 | 52 | 68 | 275 | 101 | 275 | 462 | 122 | 189 | 1100 |
| 29 | 30 | 170 | 36 | 44 | --- | 223 | 74 | 347 | 598 | 167 | 72 | 1260 |
| 30 | 26 | 160 | 35 | 39 | --- | 197 | 77 | 207 | 504 | 112 | 44 | 1320 |
| 31 | 24 | --- | 36 | 38 | --- | 176 | --- | 141 | --- | 67 | 35 | --- |
| TOTAL | 1524.7 | 13631 | 6410 | 1771 | 5900 | 17968 | 2942 | 3056 | 3206 | 6542 | 2259 | 10955 |
| MEAN | 49.2 | 454 | 207 | 57.1 | 211 | 580 | 98.1 | 98.6 | 107 | 211 | 72.9 | 365 |
| MAX | 173 | 1120 | 1400 | 146 | 804 | 2060 | 158 | 347 | 598 | 484 | 358 | 1320 |
| MIN | 3.8 | 57 | 35 | 28 | 44 | 61 | 60 | 31 | 37 | 47 | 17 | 14 |
| CFSM | .26 | 2.39 | 1.09 | .30 | 1.11 | 3.05 | .52 | .52 | .56 | 1.11 | .38 | 1.92 |
| IN. | .30 | 2.67 | 1.26 | .35 | 1.16 | 3.52 | .58 | .60 | .63 | 1.28 | .44 | 2.14 |

CAL YR 1985 TOTAL 62196.3 MEAN 170 MAX 1600 MIN 3.1 CFSM .90 IN 12.18
WTR YR 1986 TOTAL 76164.7 MEAN 209 MAX 2060 MIN 3.8 CFSM 1.10 IN 14.91

## 04087257 PIKE RIVER NEAR RACINE, WI

LOCATION.--Lat 42°38'49", long 87°51'38", in SE 1/4 NE 1/4 sec.11, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, on right bank just downstream from unnamed tributary, 1.7 mi downstream from Pike Creek, 6.8 mi southwest of Racine Post Office and 9.0 mi upstream from mouth.

DRAINAGE AREA.--38.5 mi$^2$.

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR WI-76-1: 1975. WDR WI-80-1: Drainage area

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 620.09 ft above mean sea level (Southeastern Wisconsin Regional Planning Commission).

REMARKS.--Estimated daily discharge: Mar. 12, 13 and ice periods listed in rating table below. Records good except those for estimated daily discharges and periods of ice effect, which are fair. Low flows considerably affected by effluent discharge in upper portion of basin, and by occasional regulation of small recreation dam 1.1 mi upstream.

AVERAGE DISCHARGE.--15 years, 37.3 ft$^3$/s, 13.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft$^3$/s Mar. 4, 1976, gage height, 8.15 ft; minimum daily, 0.35 ft$^3$/s Sept. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 600 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Dec. 1 | 1630 | 860 | 6.65 | June 27 | 1145 | 686 | 6.01 |
| Feb. 4 | 1915 | 613 | 5.67 | Sept. 25 | 0430 | 1,020 | 7.19 |
| Mar. 10 | 1315 | *1,090 | *7.44 | Sept. 29 | 1945 | 825 | 6.52 |

Minimum daily, 4.3 ft$^3$/s Oct. 6, 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 12 to Jan. 18, Jan. 26 to Feb. 3, Feb. 9-19, 22, 23, 28, and Mar. 6-8.)

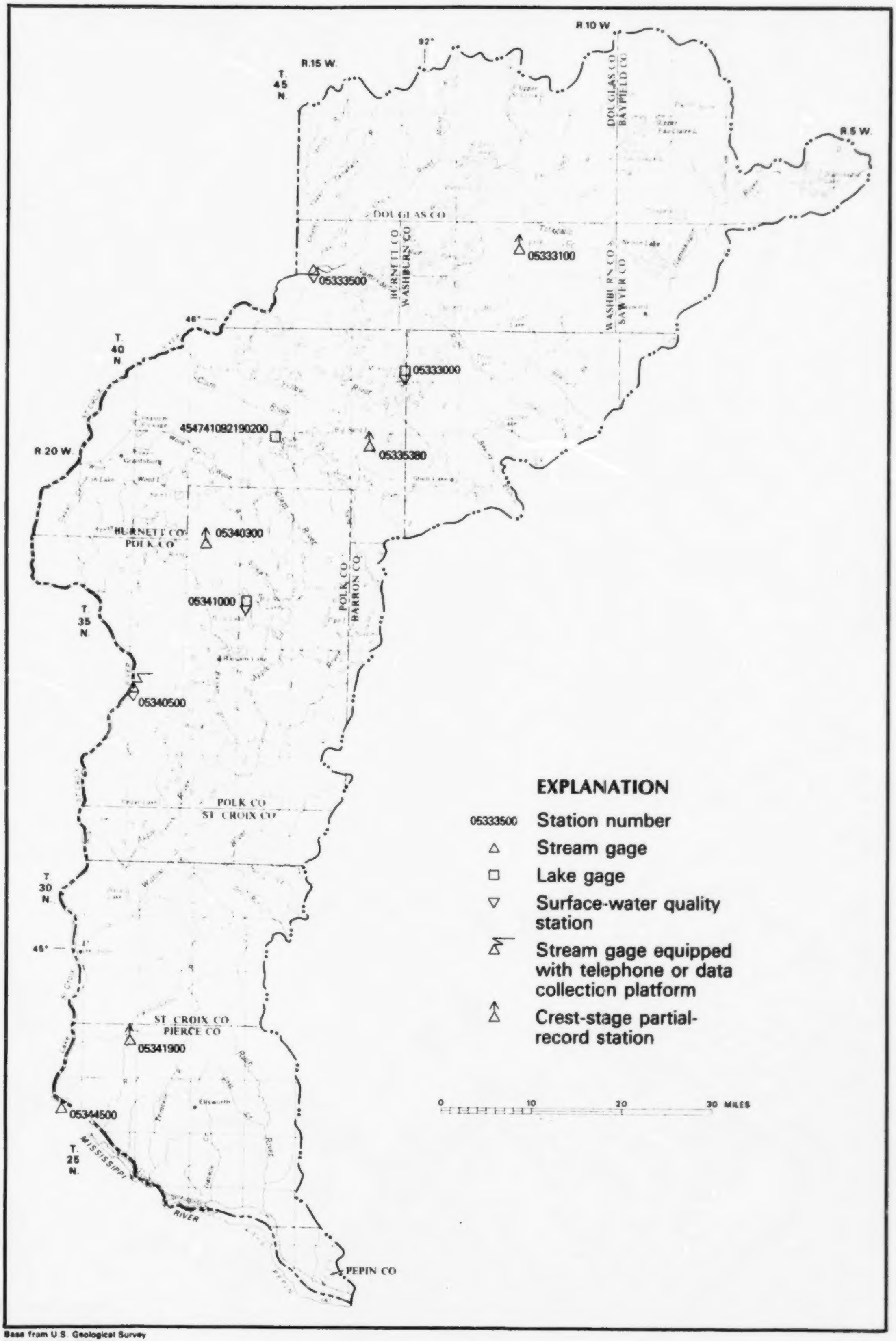
| | | | |
|---|---|---|---|
| 1.7 | 3.8 | 3.0 | 93 |
| 1.8 | 6.4 | 4.0 | 242 |
| 2.0 | 14 | 5.0 | 440 |
| 2.2 | 24 | 6.0 | 684 |
| 2.5 | 44 | 7.0 | 958 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.4 | 130 | 477 | 9.4 | 30 | 12 | 29 | 24 | 27 | 37 | 11 | 7.0 |
| 2 | 4.5 | 468 | 310 | 9.4 | 50 | 12 | 25 | 14 | 25 | 31 | 9.6 | 8.0 |
| 3 | 4.6 | 221 | 143 | 9.2 | 28 | 15 | 25 | 11 | 24 | 24 | 7.4 | 10 |
| 4 | 16 | 128 | 92 | 9.2 | 273 | 25 | 24 | 12 | 23 | 21 | 8.1 | 10 |
| 5 | 7.3 | 87 | 62 | 9.0 | 257 | 44 | 22 | 21 | 92 | 18 | 9.7 | 6.9 |
| 6 | 4.3 | 64 | 49 | 8.6 | 89 | 50 | 20 | 13 | 59 | 17 | 28 | 5.5 |
| 7 | 4.3 | 63 | 41 | 8.2 | 60 | 40 | 20 | 10 | 39 | 42 | 33 | 5.3 |
| 8 | 15 | 47 | 37 | 8.2 | 42 | 30 | 19 | 13 | 30 | 165 | 17 | 5.3 |
| 9 | 37 | 59 | 32 | 8.0 | 33 | 72 | 18 | 14 | 26 | 135 | 11 | 6.3 |
| 10 | 64 | 229 | 33 | 8.0 | 27 | 837 | 18 | 13 | 30 | 59 | 9.3 | 95 |
| 11 | 23 | 112 | 37 | 8.0 | 22 | 364 | 15 | 11 | 33 | 99 | 9.6 | 201 |
| 12 | 41 | 86 | 32 | 8.0 | 18 | 300 | 12 | 14 | 27 | 112 | 10 | 143 |
| 13 | 30 | 109 | 28 | 8.0 | 15 | 220 | 12 | 14 | 24 | 83 | 9.8 | 58 |
| 14 | 16 | 101 | 25 | 8.4 | 14 | 169 | 15 | 13 | 24 | 46 | 15 | 33 |
| 15 | 12 | 71 | 22 | 9.0 | 13 | 118 | 32 | 13 | 31 | 40 | 12 | 26 |
| 16 | 14 | 174 | 20 | 10 | 12 | 94 | 24 | 15 | 26 | 101 | 8.4 | 22 |
| 17 | 13 | 125 | 19 | 15 | 11 | 81 | 21 | 37 | 23 | 45 | 7.1 | 19 |
| 18 | 13 | 242 | 18 | 100 | 11 | 95 | 20 | 119 | 19 | 31 | 8.0 | 18 |
| 19 | 194 | 370 | 17 | 140 | 20 | 138 | 18 | 53 | 19 | 36 | 8.7 | 17 |
| 20 | 88 | 297 | 16 | 73 | 63 | 66 | 17 | 37 | 20 | 57 | 8.7 | 15 |
| 21 | 51 | 136 | 15 | 50 | 38 | 46 | 18 | 22 | 19 | 25 | 8.9 | 18 |
| 22 | 36 | 88 | 14 | 49 | 24 | 38 | 16 | 26 | 19 | 22 | 8.4 | 28 |
| 23 | 29 | 62 | 13 | 33 | 20 | 36 | 12 | 25 | 16 | 19 | 7.1 | 203 |
| 24 | 31 | 47 | 13 | 26 | 18 | 32 | 9.3 | 21 | 18 | 15 | 5.6 | 110 |
| 25 | 20 | 41 | 12 | 22 | 17 | 33 | 12 | 19 | 17 | 28 | 7.5 | 742 |
| 26 | 24 | 49 | 11 | 19 | 17 | 51 | 37 | 12 | 12 | 17 | 47 | 486 |
| 27 | 13 | 45 | 11 | 17 | 16 | 45 | 23 | 142 | 373 | 14 | 57 | 380 |
| 28 | 10 | 42 | 10 | 14 | 15 | 38 | 18 | 146 | 174 | 29 | 21 | 214 |
| 29 | 13 | 41 | 10 | 12 | --- | 33 | 15 | 76 | 78 | 17 | 15 | 566 |
| 30 | 16 | 47 | 9.8 | 11 | --- | 30 | 22 | 43 | 50 | 14 | 9.6 | 470 |
| 31 | 18 | --- | 9.6 | 9.8 | --- | 26 | --- | 40 | --- | 12 | 7.9 | --- |
| TOTAL | 866.4 | 3781 | 1638.4 | 729.4 | 1253 | 3190 | 588.3 | 1043 | 1397 | 1411 | 436.4 | 3928.3 |
| MEAN | 27.9 | 126 | 52.9 | 23.5 | 44.8 | 103 | 19.6 | 33.6 | 46.6 | 45.5 | 14.1 | 131 |
| MAX | 194 | 468 | 477 | 140 | 273 | 837 | 37 | 146 | 373 | 165 | 57 | 742 |
| MIN | 4.3 | 41 | 9.6 | 8.0 | 11 | 12 | 9.3 | 10 | 12 | 12 | 5.6 | 5.3 |
| CFSM | .73 | 3.27 | 1.37 | .61 | 1.16 | 2.68 | .51 | .87 | 1.21 | 1.18 | .37 | 3.40 |
| IN. | .84 | 3.65 | 1.58 | .70 | 1.21 | 3.08 | .57 | 1.01 | 1.35 | 1.36 | .42 | 3.80 |

CAL YR 1985 TOTAL 14954.3 MEAN 41.0 MAX 477 MIN 1.9 CFSM 1.07 IN 14.45
WTR YR 1986 TOTAL 20262.2 MEAN 55.5 MAX 837 MIN 4.3 CFSM 1.44 IN 19.58

# UPPER MISSISSIPPI RIVER BASIN RECORDS



Base from U.S. Geological Survey
State base map, 1968

ST CROIX RIVER BASIN

BEST COPY AVAILABLE

## 05333000 McKENZIE LAKE NEAR SPOONER, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 45°55'58", long 92°02'17", in SE 1/4 sec.24, T.40 N., R.14 W., Burnett County, Hydrologic Unit 07030002, at outlet of McKenzie Lake, 10.2 mi northwest of Spooner.

DRAINAGE AREA.--32.3 mi$^2$.

PERIOD OF RECORD.--August 1936 to September 1976, April 1985 to current year. Data 1936 to 1976 unpublished in district files.

GAGE.--Staff gage read by Fred Kruger. Elevation of gage is 990 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD (EXCLUDING 1985 WATER YEAR).--Maximum gage height observed, 1.36 ft May 30, 1937; minimum observed, -0.52 ft Sept. 16, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 1.08 ft, May 13; minimum observed, 0.42 ft, July 3.

REVISED RECORDS.--The gage datum for water year 1985 is given incorrectly at 990 ft from topographic map; gage datum is unknown.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 27 | 0.65 | MAY 21 | 0.94 | JUNE 17 | 0.58 | JULY 4 | 0.54 | JULY 14 | 0.60 | AUG. 9 | 0.88 |
| MAY 10 | 0.74 | JUNE 8 | 0.70 | JUNE 26 | 0.52 | JULY 6 | 0.58 | JULY 26 | 0.66 | AUG. 10 | 0.96 |
| MAY 13 | 1.08 | JUNE 14 | 0.62 | JULY 3 | 0.42 | JULY 10 | 0.54 | AUG. 4 | 0.68 | AUG. 11 | 0.96 |
| | | | | | | | | | | SEPT. 13 | 0.60 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 45°55'06", long 92°01'54", in SW 1/4 sec.30, T.40 N., R.13 W., Burnett County, Hydrologic Unit 07030002, near center of lake, and 9.8 mi northwest of Spooner.

PERIOD OF RECORD.--April 1985 to current year.

REMARKS.--Secchi disc readings made by Fred Kruger.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 27 | 3.7 | JUNE 8 | 4.2 | JUNE 26 | 2.4 | JULY 4 | 2.4 | JULY 14 | 2.4 | AUG. 11 | 1.8 |
| MAY 21 | 4.3 | JUNE 14 | 3.7 | JULY 3 | 3.2 | JULY 10 | 2.9 | JULY 26 | 2.4 | SEPT. 13 | 2.1 |

## 05333500 ST. CROIX RIVER NEAR DANBURY, WI

LOCATION.--Lat 46°04'28", long 92°14'50", in SW 1/4 sec.33, T.42 N., R.15 W., Burnett County, Hydrologic Unit 07030001, St. Croix National Scenic Waterway, on left bank at downstream side of bridge on State Highway 35, 3.5 mi downstream from Namekagon River, 10 mi northeast of Danbury, and at mile 129.2.

DRAINAGE AREA.--1,580 mi$^2$.

PERIOD OF RECORD.--March 1914 to September 1981, October 1984 to September 1985. Prior to October 1933, published as "at Swiss".

REVISED RECORDS.--WSP 1438: 1915(M), 1919-20, 1923-24(M), 1927(M), 1931(M), 1934, 1935-37(M). WSP 1628: 1918. WDR WI-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 882.21 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1937, nonrecording gage 40 ft downstream at same datum. Apr. 23, 1937, to Jan. 5, 1939, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair.

AVERAGE DISCHARGE.--69 years (water years 1915-81, 1985-86), 1,316 ft$^3$/s, 11.31 in/yr.

EXTREMES FOR PERIODS OF RECORD.--Maximum discharge, 10,200 ft$^3$/s May 6, 1950, gage height, 8.22 ft; minimum observed, 393 ft$^3$/s Aug. 6, 13, 1934, gage height, -0.20 ft, site then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 9 | 0300 | 3,310 | 3.37 | May 14 | 2300 | *6,640 | *5.92 |
| Apr. 4 | 1000 | 6,580 | 5.88 | July 27 | 1500 | 3,010 | 3.11 |
| Apr. 29 | 1100 | 3,570 | 3.60 | Sept. 26 | 2000 | 3,850 | 3.83 |

Minimum discharge, 1,080 ft$^3$/s, July 3, gage height, 1.06 ft

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 23 to Mar. 30.)

| | | | |
|---|---|---|---|
| 1.0 | 1,020 | 4.0 | 4,050 |
| 2.0 | 1,900 | 5.0 | 6,760 |
| 3.0 | 2,880 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2690 | 1780 | 1600 | 1400 | 1200 | 1200 | 5160 | 3070 | 1390 | 1180 | 2010 | 1560 |
| 2 | 2940 | 1820 | 1500 | 1400 | 1200 | 1200 | 6000 | 2880 | 1390 | 1130 | 1770 | 1480 |
| 3 | 3000 | 1820 | 1500 | 1400 | 1200 | 1200 | 6320 | 2660 | 1280 | 1180 | 1560 | 1520 |
| 4 | 2960 | 1780 | 1500 | 1400 | 1200 | 1200 | 6550 | 2230 | 1590 | 1250 | 1540 | 1780 |
| 5 | 2860 | 1810 | 1500 | 1400 | 1200 | 1200 | 6330 | 2240 | 1720 | 1420 | 1590 | 1680 |
| 6 | 2820 | 1900 | 1500 | 1400 | 1200 | 1200 | 6030 | 2080 | 1580 | 1500 | 1600 | 1580 |
| 7 | 2710 | 1770 | 1500 | 1400 | 1200 | 1200 | 5650 | 1920 | 1680 | 1400 | 2030 | 1530 |
| 8 | 3090 | 1680 | 1500 | 1400 | 1200 | 1200 | 4880 | 1860 | 1850 | 1310 | 2740 | 1500 |
| 9 | 3210 | 1770 | 1500 | 1400 | 1200 | 1200 | 4130 | 2220 | 1720 | 1300 | 2460 | 1540 |
| 10 | 3060 | 1670 | 1500 | 1400 | 1200 | 1200 | 3960 | 2510 | 1650 | 1250 | 2700 | 1560 |
| 11 | 2860 | 1640 | 1500 | 1300 | 1200 | 1200 | 3720 | 2960 | 1700 | 1290 | 2700 | 1660 |
| 12 | 2920 | 1650 | 1500 | 1300 | 1200 | 1200 | 3220 | 3650 | 1750 | 1440 | 2480 | 1640 |
| 13 | 3150 | 1580 | 1500 | 1300 | 1200 | 1300 | 2960 | 4490 | 1720 | 1660 | 2280 | 1640 |
| 14 | 2910 | 1540 | 1500 | 1300 | 1200 | 1300 | 2810 | 6140 | 1570 | 1710 | 1970 | 1620 |
| 15 | 2630 | 1570 | 1500 | 1300 | 1200 | 1400 | 2740 | 6250 | 1560 | 1800 | 2450 | 1780 |
| 16 | 2610 | 1540 | 1400 | 1300 | 1200 | 1400 | 2710 | 5260 | 1450 | 2020 | 2420 | 1830 |
| 17 | 2580 | 1570 | 1400 | 1300 | 1200 | 1500 | 2760 | 4450 | 1380 | 2030 | 2220 | 1910 |
| 18 | 2500 | 1660 | 1400 | 1300 | 1200 | 1500 | 2650 | 4060 | 1310 | 1790 | 1980 | 2210 |
| 19 | 2320 | 1890 | 1400 | 1300 | 1200 | 1600 | 2530 | 3690 | 1290 | 1860 | 1690 | 2240 |
| 20 | 2150 | 1820 | 1400 | 1300 | 1200 | 1500 | 2510 | 2980 | 1260 | 2100 | 1810 | 2520 |
| 21 | 2000 | 1720 | 1400 | 1300 | 1200 | 1600 | 2450 | 2390 | 1330 | 2040 | 2170 | 2680 |
| 22 | 1880 | 1610 | 1400 | 1300 | 1200 | 1600 | 2350 | 2300 | 1720 | 1800 | 2270 | 3380 |
| 23 | 1930 | 1600 | 1400 | 1300 | 1200 | 1600 | 2240 | 2190 | 1680 | 1610 | 2830 | 3620 |
| 24 | 2010 | 1600 | 1400 | 1300 | 1200 | 1500 | 2160 | 2070 | 1630 | 1560 | 2740 | 3500 |
| 25 | 1940 | 1600 | 1400 | 1300 | 1200 | 1900 | 2110 | 2040 | 1670 | 1540 | 2460 | 3630 |
| 26 | 1940 | 1500 | 1400 | 1200 | 1200 | 2400 | 2160 | 2010 | 1470 | 1470 | 2260 | 3830 |
| 27 | 1800 | 1500 | 1400 | 1200 | 1100 | 2100 | 2490 | 1910 | 1440 | 2600 | 2100 | 3510 |
| 28 | 1710 | 1400 | 1400 | 1200 | 1100 | 2000 | 3150 | 1700 | 1370 | 2780 | 1920 | 3130 |
| 29 | 1670 | 1400 | 1400 | 1200 | --- | 1900 | 3520 | 1720 | 1300 | 2320 | 1740 | 2790 |
| 30 | 1840 | 1500 | 1400 | 1200 | --- | 2200 | 3300 | 1550 | 1210 | 2100 | 1650 | 2850 |
| 31 | 1770 | --- | 1400 | 1200 | --- | 3360 | --- | 1470 | --- | 2000 | 1620 | --- |
| TOTAL | 76460 | 49690 | 45000 | 40700 | 33400 | 48060 | 109550 | 88950 | 45660 | 52440 | 65760 | 67700 |
| MEAN | 2466 | 1656 | 1452 | 1313 | 1193 | 1550 | 3652 | 2869 | 1522 | 1692 | 2121 | 2257 |
| MAX | 3210 | 1900 | 1600 | 1400 | 1200 | 3360 | 6550 | 6250 | 1850 | 2780 | 2830 | 3830 |
| MIN | 1670 | 1400 | 1400 | 1200 | 1100 | 1200 | 2110 | 1470 | 1210 | 1130 | 1540 | 1480 |
| CFSM | 1.56 | 1.05 | .92 | .83 | .76 | .98 | 2.31 | 1.82 | .96 | 1.07 | 1.34 | 1.43 |
| IN. | 1.80 | 1.17 | 1.06 | .96 | .79 | 1.13 | 2.58 | 2.09 | 1.08 | 1.23 | 1.55 | 1.59 |

CAL YR 1985 TOTAL 667252 MEAN 1828 MAX 4370 MIN 922 CFSM 1.16 IN 15.71
WTR YR 1986 TOTAL 723370 MEAN 1982 MAX 6550 MIN 1100 CFSM 1.25 IN 17.03

## 454711090203000 CLAM LAKE NEAR SIREN, WI

LOCATION.--Lat 45°47'11", long 90°20'30", in SW 1/4 SW 1/4 sec.10, T.38 N., R.16 W., Burnett County, Hydrologic Unit 07030001, 1.8 mi east of Siren.

PERIOD OF RECORD.--April 1985 to September 1986.

GAGE.--Staff gage read by Gordon Arbuckle. Elevation of gage is 950 ft, from topographic map. Prior to October 1985, staff gage located at the southeast side of lake approximately 3.1 mi east of Siren.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.19 ft, May 12, 1986; minimum observed, 7.79 ft, Oct. 28, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.19 ft, May 19; minimum observed, 7.79 ft, Oct. 28.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 6 | 10.47 | NOV. 4 | 8.85 | JUNE 2 | 9.09 | JULY 7 | 9.09 | JULY 29 | 9.10 | AUG. 18 | 9.39 |
| OCT. 16 | 10.19 | NOV. 11 | 9.37 | JUNE 9 | 8.99 | JULY 14 | 9.39 | AUG. 4 | 9.39 | SEPT. 2 | 9.19 |
| OCT. 22 | 9.47 | MAY 19 | 11.19 | JUNE 17 | 8.89 | JULY 21 | 9.89 | AUG. 11 | 9.39 | SEPT. 9 | 9.19 |
| OCT. 28 | 7.79 | MAY 27 | 9.39 | JUNE 23 | 8.99 | JULY 28 | 9.49 | | | | |

## 05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI
## (NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 45°24'25", long 92°38'49", in SW 1/4 NW 1/4 sec.30, T.34 N., R.18 W., Polk County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, on left bank, 1,500 ft downstream from powerplant of Northern States Power Co., in St. Croix Falls, and at mile 52.2.

DRAINAGE AREA.--6,240 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1902 to current year. Prior to January 1910, monthly discharge only, published in WSP 1308. Prior to October 1939, published as "near St. Croix Falls."

REVISED RECORDS.--WSP 1115: 1929. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 689.94 ft above National Geodetic Vertical Datum of 1929. Prior to July 1905, gage heights and discharge measurements were used by Loweth and Wolff, consulting engineers of St. Paul, Minn., to determine the flow. July 1905 to February 1940, records were computed from power generation at the St. Croix Falls Powerplant. February 1940 to Sept. 30, 1979, water-stage recorder at site 300 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records are good. Diurnal fluctuation caused by St. Croix Falls Powerplant 1,500 ft upstream. Data-collection platform at station.

AVERAGE DISCHARGE.--84 years, 4,346 ft$^3$/s, 9.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,900 ft$^3$/s May 8, 1950, gage height, 25.19 ft; minimum daily, 75 ft$^3$/s July 17, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,000 ft$^3$/s May 14, gage height, 17.17 ft; minimum daily, 1,460 ft$^3$/s Feb. 13.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 2.5 | 1,400 | 9.0 | 18,200 |
| 3.0 | 2,350 | 12.0 | 25,400 |
| 4.0 | 4,950 | 14.0 | 29,900 |
| 6.0 | 10,700 | 16.0 | 34,400 |
| | | 18.0 | 38,900 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9880 | 6020 | 3450 | 3380 | 2590 | 2720 | 23900 | 32800 | 5400 | 4480 | 7730 | 5350 |
| 2 | 10600 | 5650 | 3720 | 3420 | 3170 | 2860 | 29300 | 30000 | 5450 | 4140 | 7330 | 5470 |
| 3 | 11400 | 5770 | 3270 | 3270 | 2900 | 3150 | 34100 | 26200 | 4810 | 3820 | 6750 | 7190 |
| 4 | 12600 | 5630 | 3930 | 3360 | 2560 | 3320 | 36000 | 22200 | 4730 | 4000 | 5930 | 8840 |
| 5 | 11300 | 5680 | 4210 | 3430 | 2620 | 3060 | 36000 | 18900 | 4870 | 4250 | 5640 | 9010 |
| 6 | 10400 | 5550 | 3980 | 3460 | 2200 | 3160 | 34700 | 16000 | 5140 | 4530 | 5520 | 8970 |
| 7 | 9240 | 5530 | 4220 | 3420 | 2810 | 3290 | 32400 | 14100 | 5650 | 5160 | 6000 | 7530 |
| 8 | 9850 | 5560 | 4390 | 3600 | 2510 | 3350 | 29600 | 12300 | 5460 | 4540 | 7060 | 7120 |
| 9 | 10100 | 5450 | 4330 | 3370 | 2510 | 3140 | 27000 | 14700 | 6450 | 4630 | 9020 | 6660 |
| 10 | 10800 | 5290 | 4360 | 3490 | 1870 | 3250 | 24000 | 17800 | 5770 | 3940 | 10300 | 6500 |
| 11 | 10900 | 4860 | 4460 | 3330 | 2390 | 3190 | 21000 | 22500 | 6310 | 4090 | 10700 | 6270 |
| 12 | 11000 | 4910 | 4680 | 3210 | 1960 | 3430 | 18700 | 27400 | 8170 | 4560 | 10200 | 6470 |
| 13 | 11300 | 4620 | 4170 | 3140 | 1460 | 3480 | 16700 | 32200 | 11200 | 5620 | 9090 | 6460 |
| 14 | 12100 | 4880 | 4190 | 3280 | 1870 | 3500 | 14800 | 36700 | 11700 | 6320 | 7400 | 6450 |
| 15 | 12500 | 4560 | 4100 | 3500 | 2240 | 3320 | 13600 | 36300 | 10300 | 6180 | 7310 | 6390 |
| 16 | 11800 | 4890 | 3700 | 3300 | 2220 | 3610 | 13200 | 35200 | 8840 | 6500 | 9110 | 6990 |
| 17 | 10700 | 4640 | 3900 | 3360 | 3080 | 3760 | 12800 | 32400 | 8140 | 7730 | 9710 | 7710 |
| 18 | 10100 | 4450 | 3930 | 3280 | 2690 | 4630 | 12300 | 28400 | 7340 | 8610 | 8620 | 10200 |
| 19 | 9650 | 4810 | 3800 | 3300 | 2520 | 4070 | 12100 | 24500 | 7060 | 9380 | 7340 | 14400 |
| 20 | 9100 | 4830 | 3740 | 3210 | 2780 | 4430 | 12100 | 20700 | 5700 | 9550 | 6790 | 16300 |
| 21 | 8210 | 4300 | 3600 | 3340 | 2790 | 4890 | 12500 | 17900 | 5560 | 8670 | 6710 | 17800 |
| 22 | 7790 | 3630 | 3350 | 3180 | 2260 | 4160 | 12100 | 15100 | 6480 | 8290 | 7200 | 21000 |
| 23 | 7460 | 4010 | 3570 | 3140 | 2470 | 4700 | 9630 | 12700 | 7150 | 7320 | 9480 | 22900 |
| 24 | 7250 | 2380 | 3610 | 3480 | 2350 | 4780 | 10100 | 11200 | 7740 | 6750 | 10800 | 24900 |
| 25 | 7190 | 3450 | 3620 | 3230 | 2780 | 5060 | 10200 | 9920 | 7260 | 6190 | 11500 | 24900 |
| 26 | 6770 | 3220 | 3580 | 3380 | 2900 | 5790 | 10600 | 9250 | 7210 | 6290 | 10600 | 23400 |
| 27 | 6690 | 3600 | 3500 | 2480 | 3010 | 6520 | 12600 | 9130 | 6170 | 6110 | 8830 | 21800 |
| 28 | 6470 | 3020 | 3550 | 2940 | 3000 | 7260 | 19200 | 8450 | 5680 | 9590 | 7570 | 20600 |
| 29 | 6150 | 3600 | 3470 | 2850 | --- | 10500 | 28100 | 7010 | 5280 | 12100 | 6830 | 18800 |
| 30 | 6020 | 3460 | 3460 | 2500 | --- | 14800 | 32000 | 5900 | 4580 | 12400 | 6560 | 16400 |
| 31 | 5520 | --- | 3430 | 2670 | --- | 17000 | --- | 5670 | --- | 10100 | 5540 | --- |
| TOTAL | 290840 | 138250 | 119270 | 100300 | 70510 | 154180 | 611330 | 613530 | 201600 | 205840 | 249170 | 372780 |
| MEAN | 9382 | 4608 | 3847 | 3235 | 2518 | 4974 | 20380 | 19790 | 6720 | 6640 | 8038 | 12430 |
| MAX | 12600 | 6020 | 4680 | 3600 | 3170 | 17000 | 36000 | 36700 | 11700 | 12400 | 11500 | 24900 |
| MIN | 5520 | 2380 | 3270 | 2480 | 1460 | 2720 | 9630 | 5670 | 4580 | 3820 | 5520 | 5350 |
| CFSM | 1.50 | .74 | .62 | .52 | .40 | .80 | 3.27 | 3.17 | 1.08 | 1.06 | 1.29 | 1.99 |
| IN. | 1.73 | .82 | .71 | .60 | .42 | .92 | 3.64 | 3.66 | 1.20 | 1.23 | 1.49 | 2.22 |

CAL YR 1985 TOTAL 2327470 MEAN 6377 MAX 27200 MIN 1960 CFSM 1.02 IN 13.88
WTR YR 1986 TOTAL 3127600 MEAN 8569 MAX 36700 MIN 1460 CFSM 1.37 IN 18.65

## 05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, 1974 to September 1986 (discontinued).

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 07... | 1220 | 7870 | 129 | 7.30 | 8.5 | 2.7 | 10.8 | 748 | 94 |
| JAN , 1986 | | | | | | | | | |
| 07... | 1030 | 5150 | 193 | 7.30 | .5 | 2.9 | 9.7 | 771 | 67 |
| FEB | | | | | | | | | |
| 24... | 1200 | 1800 | 211 | 7.50 | .0 | 2.7 | 9.4 | 757 | 65 |
| APR | | | | | | | | | |
| 04... | 1110 | 36000 | 85 | 7.20 | 3.5 | -- | 12.4 | 755 | 94 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | |
| 07... | 40 | 320 | 61 | 8 | 16 | 5.2 | 2.4 | 8 | .1 | 1.0 |
| JAN , 1986 | | | | | | | | | | |
| 07... | K6 | K9 | 95 | 14 | 25 | 7.8 | 3.3 | 7 | .2 | 1.0 |
| FEB | | | | | | | | | | |
| 24... | K5 | K4 | 96 | 6 | 25 | 8.2 | 3.6 | 7 | .2 | 1.0 |
| APR | | | | | | | | | | |
| 04... | K67 | 110 | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 07... | 65 | -- | 52 | 5.2 | 9.2 | 3.2 | <.10 | 10 | 99 |
| JAN , 1986 | | | | | | | | | |
| 07... | 99 | -- | 80 | 7.9 | 9.9 | 3.5 | <.10 | 17 | 121 |
| FEB | | | | | | | | | |
| 24... | 110 | -- | 88 | 5.5 | 8.5 | 3.3 | <.10 | 17 | 117 |
| APR | | | | | | | | | |
| 04... | 37 | -- | 30 | -- | -- | -- | -- | -- | -- |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 07... | 80 | .13 | 2100 | .11 | .020 | .30 | .050 | .030 | <.010 |
| JAN , 1986 | | | | | | | | | |
| 07... | 120 | .16 | 1680 | .37 | .090 | .40 | .020 | .010 | <.010 |
| FEB | | | | | | | | | |
| 24... | 120 | .16 | 569 | .45 | .070 | .40 | .030 | .010 | <.010 |
| APR | | | | | | | | | |
| 04... | -- | -- | -- | .24 | .120 | .90 | .090 | .020 | <.010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | |
| 07... | 1220 | 7870 | 30 | <1 | 20 | <.5 | <1 | 6 | <3 | 1 |
| JAN , 1986 | | | | | | | | | | |
| 07... | 1030 | 5150 | 10 | <1 | 25 | <5.0 | <1 | <1 | <3 | 2 |
| FEB | | | | | | | | | | |
| 24... | 1200 | 1800 | <10 | <1 | 23 | <.5 | <1 | <1 | <3 | <1 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 07... | 430 | 6 | <4 | 20 | <.1 | <10 | 11 | <1 | 33 | <6 | <3 |
| JAN , 1986 | | | | | | | | | | | |
| 07... | 460 | <1 | <4 | 29 | <.1 | <10 | 1 | <1 | 48 | <6 | 9 |
| FEB | | | | | | | | | | | |
| 24... | 350 | <1 | 4 | 27 | <.1 | <10 | 1 | <1 | 49 | <6 | <3 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | |
| 01... | 1040 | 9710 | 138 | 9.0 | -- | -- | -- |
| 07... | 1220 | 7870 | 129 | 8.5 | 7 | 149 | 73 |
| NOV | | | | | | | |
| 26... | 1110 | 4860 | 192 | .0 | -- | -- | -- |
| JAN , 1986 | | | | | | | |
| 07... | 1030 | 5150 | 193 | .5 | 4 | 56 | 66 |
| FEB | | | | | | | |
| 24... | 1200 | 1800 | 211 | .0 | 3 | 15 | 70 |
| APR | | | | | | | |
| 04... | 1110 | 36000 | 85 | 3.5 | 26 | 2530 | 90 |
| JUN | | | | | | | |
| 13... | 1050 | 11000 | 120 | 17.5 | -- | -- | -- |
| JUL | | | | | | | |
| 23... | 1105 | 6980 | 116 | 25.0 | -- | -- | -- |

## 05341000 BONE LAKE NEAR LUCK, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 45°33'21", long 92°23'16", in SE 1/4 sec.31, T.36 N., R.16 W., Polk County, Hydrologic Unit 07030005, 4.9 mi southeast of Luck.

PERIOD OF RECORD.--September 1936 to September 1940 (fragmentary). October 1940 to September 1964 (fragmentary), in files of district office. October 1984 to current year.

GAGE.--Staff gage read by A. D. Brosveen. Elevation of gage is 1152 ft, from topographic map. Prior to 1964, staff gage 0.2 mi south at different datum.

EXTREMES FOR PERIOD OF RECORD (OCTOBER 1984 TO CURRENT YEAR).--Maximum gage height observed, 6.83 ft, July 29, 1986; minimum observed, 6.00 ft, Oct. 4, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.83 ft, July 29; minimum observed, 6.12 ft, June 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 7 | 6.63 | OCT. 30 | 6.68 | JUNE 21 | 6.12 | JULY 14 | 6.48 | AUG. 4 | 6.73 | SEPT. 1 | 6.29 |
| OCT. 15 | 6.73 | NOV. 6 | 6.68 | JUNE 30 | 6.17 | JULY 19 | 6.63 | AUG. 16 | 6.51 | SEPT. 8 | 6.23 |
| OCT. 22 | 6.78 | NOV. 14 | 6.58 | JULY 5 | 6.27 | JULY 29 | 6.83 | AUG. 25 | 6.35 | SEPT. 16 | 6.17 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 45°32'00", long 92°23'31", in NE 1/4 sec.7, T.35 N., R.16 W., Polk County, Hydrologic Unit 07030005, near center of lake, and 5.3 mi southeast of Luck.

PERIOD OF RECORD.--May 1985 to current year.

REMARKS.--Secchi disc readings made by A. D. Brosveen.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 1 | 1.7 | OCT. 29 | 2.0 | JUNE 21 | 2.1 | JULY 14 | 1.4 | AUG. 9 | 0.9 | SEPT. 1 | 0.6 |
| OCT. 8 | 1.7 | MAY 23 | 2.8 | JUNE 30 | 1.8 | JULY 19 | 1.2 | AUG. 16 | 0.8 | SEPT. 8 | 0.6 |
| OCT. 15 | 1.7 | MAY 30 | 2.7 | JULY 5 | 1.8 | JULY 29 | 1.2 | AUG. 25 | 0.6 | SEPT. 16 | 0.6 |
| OCT. 22 | 1.7 | JUNE 13 | 2.2 | | | | | | | | |

## 05344500 MISSISSIPPI RIVER AT PRESCOTT, WI

**LOCATION**.--Lat 44°44'45", long 92°48'00", in sec.9, T.26 N., R.20 W., Pierce County, Hydrologic Unit 07010206, on left bank at Prescott, 200 ft downstream from St. Croix River, 300 ft south of Chicago, Burlington & Quincy Railroad bridge, 800 ft south of bridge on U.S. Highway 10, and at mile 811.4 upstream from Ohio River.

**DRAINAGE AREA**.--44,800 mi$^2$, approximately.

**PERIOD OF RECORD**.--June 1928 to current year.

**REVISED RECORDS**.--WSP 1508: 1941. WDR MN-74: 1973.

**GAGE**.--Water-stage recorder. Datum of gage is 649.50 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1932, nonrecording gage at railroad bridge 300 ft upstream at following datums: June 3, 1928, to Sept. 30, 1929, 19.27 ft higher; Oct. 1, 1929, to Sept. 30, 1930, 17.68 ft higher; Oct. 1, 1930, to Aug. 1, 1932, 19.28 ft higher. Aug. 2, 1932, to Oct. 30, 1938, water-stage recorder at present site at datum 19.28 ft higher; Nov. 1, 1938, to Sept. 7, 1971, water-stage recorder at present site at datum 50.00 ft lower. Auxiliary water-stage recorder 10.7 mi downstream from base gage.

**REMARKS**.--No estimated daily discharges. Records good. Some regulation by reservoirs, navigation dam, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

**AVERAGE DISCHARGE**.--58 years, 17,300 ft$^3$/s, 5.27 in/yr; median of yearly mean discharges, 16,500 ft$^3$/s, 5.00 in/yr.

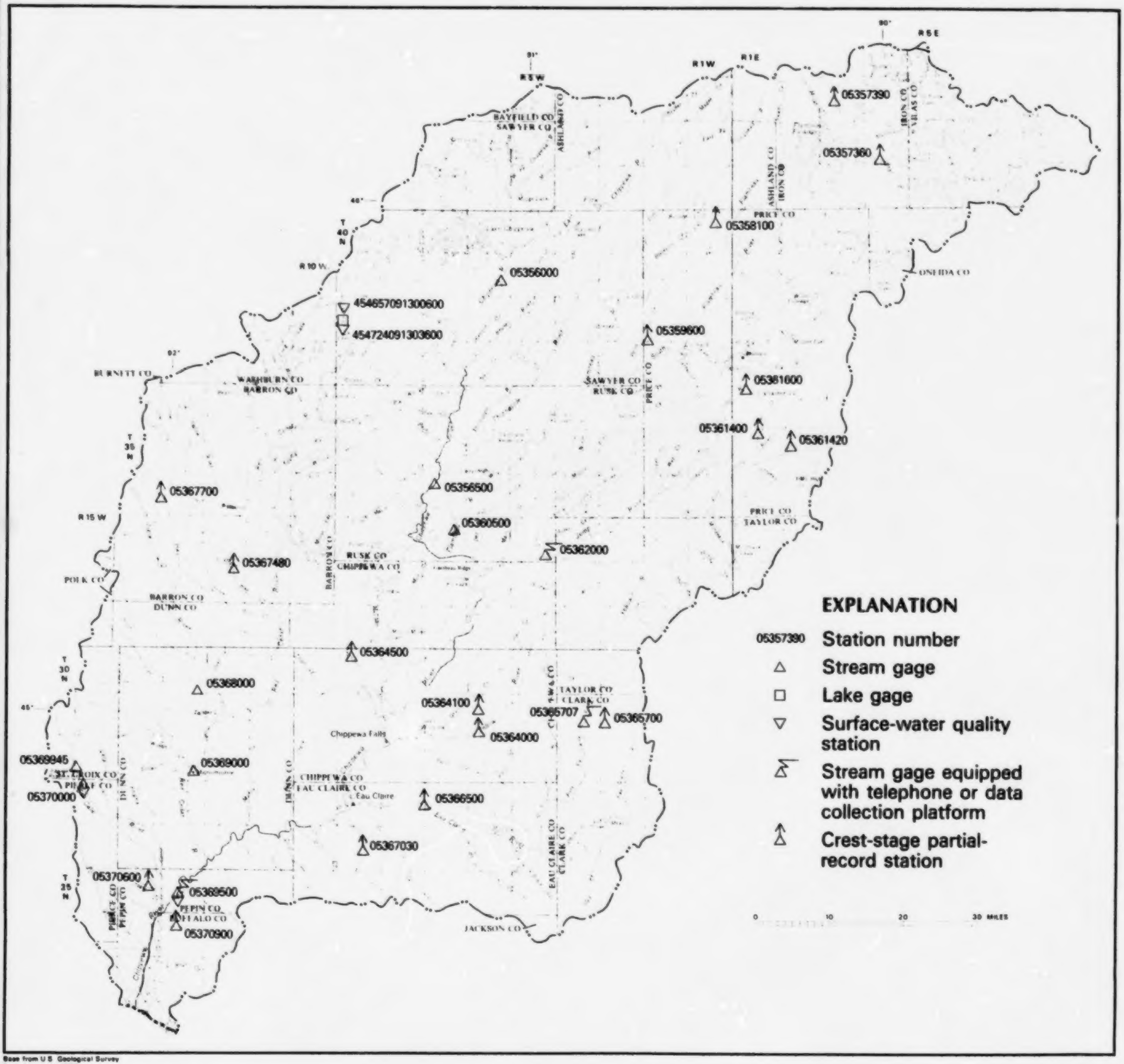
**EXTREMES FOR PERIOD OF RECORD**.--Maximum daily discharge, 228,000 ft$^3$/s Apr. 18, 1965, gage height, 43.11 ft; minimum daily, 1,380 ft$^3$/s July 13, 1940; minimum gage height, 15.08 ft Aug. 29, 1934, present datum.

**EXTREMES FOR CURRENT YEAR**.--Maximum daily discharge, 116,000 ft$^3$/s Apr. 6, 7; maximum recorded gage height, 36.37 ft, Apr. 8, but was known to be higher during period of recorder malfunction, Apr. 1-7; minimum daily, 10,600 ft$^3$/s Feb. 11; minimum gage height, 24.90 ft Mar. 6.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 32000 | 27300 | 14000 | 15700 | 14200 | 12200 | 82800 | 104000 | 47800 | 48600 | 34800 | 26800 |
| 2 | 32400 | 27100 | 14900 | 16100 | 13700 | 12200 | 93200 | 107000 | 44600 | 46800 | 33400 | 26100 |
| 3 | 33300 | 26400 | 14800 | 16300 | 15000 | 12500 | 103000 | 107000 | 43000 | 43700 | 32200 | 25400 |
| 4 | 35700 | 26000 | 14200 | 15900 | 14200 | 13100 | 111000 | 107000 | 41600 | 41100 | 31300 | 27300 |
| 5 | 38200 | 25700 | 17600 | 15600 | 13600 | 13100 | 114000 | 107000 | 39500 | 38800 | 30700 | 30000 |
| 6 | 39300 | 25500 | 19000 | 15200 | 14000 | 12800 | 116000 | 106000 | 37900 | 37100 | 30300 | 31000 |
| 7 | 40600 | 24500 | 18000 | 15000 | 13300 | 12800 | 116000 | 103000 | 36600 | 34400 | 29400 | 31200 |
| 8 | 42200 | 24100 | 18200 | 14800 | 13600 | 11400 | 109000 | 98900 | 35900 | 32400 | 29900 | 30500 |
| 9 | 43100 | 23800 | 18600 | 15200 | 13200 | 12300 | 109000 | 93600 | 35400 | 30500 | 30500 | 29600 |
| 10 | 43000 | 23300 | 18700 | 15800 | 12100 | 14500 | 106000 | 93300 | 35200 | 28900 | 31400 | 30000 |
| 11 | 43600 | 23000 | 18700 | 16000 | 10600 | 14300 | 102000 | 95200 | 34300 | 28700 | 32100 | 29900 |
| 12 | 44400 | 22600 | 18800 | 15300 | 12200 | 15000 | 98700 | 99700 | 33100 | 29100 | 31900 | 29300 |
| 13 | 44700 | 21900 | 18300 | 15000 | 12000 | 16500 | 95100 | 103000 | 34200 | 29500 | 31800 | 30400 |
| 14 | 44400 | 21100 | 17300 | 14800 | 11700 | 17600 | 93300 | 108000 | 36100 | 30000 | 32000 | 31100 |
| 15 | 44800 | 21400 | 17200 | 14700 | 12100 | 18100 | 90200 | 113000 | 37400 | 30600 | 31200 | 31300 |
| 16 | 45200 | 21700 | 17200 | 14900 | 13300 | 17900 | 86100 | 113000 | 37500 | 31800 | 30100 | 31300 |
| 17 | 44800 | 21900 | 17600 | 14700 | 12000 | 18800 | 82600 | 112000 | 35900 | 32900 | 30100 | 31700 |
| 18 | 44200 | 21600 | 17100 | 14800 | 13200 | 20100 | 80400 | 103000 | 34800 | 34300 | 30900 | 33000 |
| 19 | 42700 | 21000 | 16300 | 14500 | 13100 | 22300 | 79000 | 98100 | 34300 | 35800 | 30200 | 36100 |
| 20 | 40800 | 21000 | 16500 | 14500 | 12900 | 23500 | 77400 | 92600 | 34500 | 36600 | 28700 | 41200 |
| 21 | 39300 | 21200 | 17100 | 14700 | 12500 | 24300 | 75800 | 86600 | 34400 | 36900 | 28200 | 50400 |
| 22 | 37800 | 19500 | 17100 | 14700 | 11100 | 25700 | 75000 | 80800 | 38300 | 36700 | 27500 | 60200 |
| 23 | 36600 | 17000 | 16600 | 13700 | 12200 | 29800 | 73900 | 75800 | 40800 | 36200 | 27900 | 68400 |
| 24 | 35000 | 15700 | 17800 | 14200 | 12100 | 33500 | 72400 | 71300 | 41500 | 35800 | 29900 | 76000 |
| 25 | 33700 | 14300 | 16700 | 14600 | 11500 | 38000 | 70700 | 67900 | 44000 | 35000 | 31400 | 81800 |
| 26 | 33100 | 15100 | 15500 | 14300 | 12200 | 44800 | 70300 | 65000 | 46600 | 33400 | 32600 | 84500 |
| 27 | 31900 | 15200 | 16500 | 13200 | 12800 | 51800 | 70300 | 61900 | 48600 | 33100 | 31900 | 85700 |
| 28 | 30400 | 16500 | 16900 | 11300 | 12500 | 58200 | 73900 | 59400 | 49600 | 32600 | 30600 | 85900 |
| 29 | 29700 | 14900 | 15800 | 13200 | --- | 63100 | 79400 | 56500 | 50100 | 32100 | 29300 | 86500 |
| 30 | 28900 | 15700 | 15700 | 13800 | --- | 67600 | 88400 | 53600 | 49400 | 33300 | 28100 | 86000 |
| 31 | 28000 | --- | 16100 | 13900 | --- | 73100 | --- | 50000 | --- | 35000 | 27400 | --- |
| TOTAL | 1183800 | 636000 | 524800 | 456400 | 356900 | 820900 | 2694900 | 2793200 | 1192900 | 1081700 | 947700 | 1378600 |
| MEAN | 38190 | 21200 | 16930 | 14720 | 12750 | 26480 | 89830 | 90100 | 39760 | 34890 | 30570 | 45950 |
| MAX | 45200 | 27300 | 19000 | 16300 | 15000 | 73100 | 116000 | 113000 | 50100 | 48600 | 34800 | 86500 |
| MIN | 28000 | 14300 | 14000 | 11300 | 10600 | 11400 | 70300 | 50000 | 33100 | 28700 | 27400 | 25400 |
| CFSM | .85 | .47 | .38 | .33 | .29 | .59 | 2.01 | 2.01 | .89 | .78 | .68 | 1.03 |
| IN. | .98 | .53 | .44 | .38 | .30 | .68 | 2.24 | 2.32 | .99 | .90 | .79 | 1.14 |

CAL YR 1985 TOTAL 10018470 MEAN 27450 MAX 73000 MIN 8390 CFSM .61 IN 8.32
WTR YR 1986 TOTAL 14067800 MEAN 38540 MAX 116000 MIN 10600 CFSM .86 IN 11.68



Base from U.S. Geological Survey
State base map, 1968

CHIPPEWA RIVER BASIN

BEST COPY AVAILABLE

## 05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW 1/4 NE 1/4 sec.23, T.39 N., R.6 W., Sawyer County, Hydrologic Unit 07050001, on right bank 15 ft upstream from highway bridge on County Trunk Highway G, 3.2 mi downstream from Lake Chippewa Dam, and 3.7 mi northwest of Winter.

DRAINAGE AREA.--790 mi$^2$.

PERIOD OF RECORD.--February 1912 to current year. December to April 1913, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1913(M), 1915-18(M), 1919, 1920-23(M), 1924, 1925(M), 1927(M), 1928, 1929-30(M), 1939(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft above National Geodetic Vertical Datum of 1929 (levels by Wilhelm Engineering Co.). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Moose Lake and Lake Chippewa.

AVERAGE DISCHARGE.--74 years, 729 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft$^3$/s Sept. 4, 5, 1941, gage height, 11.05 ft; minimum, 14 ft$^3$/s Apr. 17-20, 1925, gage height, 3.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,290 ft$^3$/s Oct. 9, gage height, 9.98 ft; minimum discharge, 70 ft$^3$/s Oct. 17, gage height 3.72 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 4.0 | 134 | 6.0 | 1,430 |
| 4.3 | 248 | 7.0 | 2,400 |
| 4.6 | 399 | 8.0 | 3,600 |
| 5.0 | 660 | 10.0 | 6,320 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2150 | 885 | 1530 | 1400 | 1240 | 136 | 661 | 1440 | 229 | 706 | 1060 | 296 |
| 2 | 2260 | 1170 | 1530 | 1390 | 1240 | 134 | 482 | 1430 | 231 | 705 | 1060 | 262 |
| 3 | 2300 | 1170 | 1530 | 1390 | 1230 | 135 | 323 | 1430 | 231 | 706 | 1060 | 181 |
| 4 | 2980 | 1190 | 1520 | 1390 | 992 | 137 | 303 | 1430 | 230 | 711 | 1060 | 245 |
| 5 | 3950 | 1220 | 1520 | 1390 | 700 | 137 | 322 | 1430 | 230 | 708 | 1060 | 191 |
| 6 | 4670 | 1220 | 1520 | 1380 | 327 | 139 | 319 | 1430 | 230 | 707 | 1070 | 175 |
| 7 | 5430 | 1200 | 1510 | 1380 | 137 | 183 | 299 | 1410 | 232 | 704 | 1070 | 175 |
| 8 | 5900 | 1180 | 1500 | 1380 | 134 | 222 | 331 | 1420 | 232 | 696 | 1060 | 174 |
| 9 | 6000 | 1180 | 1490 | 1370 | 193 | 137 | 773 | 1120 | 236 | 507 | 1060 | 176 |
| 10 | 6230 | 1180 | 1490 | 1360 | 239 | 138 | 1300 | 612 | 238 | 315 | 1060 | 229 |
| 11 | 5690 | 1160 | 1490 | 1360 | 237 | 281 | 1680 | 618 | 243 | 518 | 1060 | 265 |
| 12 | 5330 | 1180 | 1490 | 1340 | 215 | 550 | 1680 | 616 | 277 | 488 | 1060 | 243 |
| 13 | 5050 | 1490 | 1480 | 1340 | 248 | 549 | 1690 | 639 | 234 | 486 | 1060 | 176 |
| 14 | 3580 | 1470 | 1480 | 1340 | 221 | 684 | 1690 | 739 | 233 | 486 | 1060 | 178 |
| 15 | 2770 | 1530 | 1470 | 1330 | 217 | 1190 | 1710 | 1340 | 234 | 495 | 1060 | 231 |
| 16 | 2570 | 1530 | 1470 | 1320 | 156 | 1190 | 1770 | 1470 | 232 | 492 | 1060 | 235 |
| 17 | 1780 | 1530 | 1470 | 1320 | 138 | 1180 | 2140 | 1460 | 287 | 537 | 1050 | 680 |
| 18 | 2200 | 1520 | 1460 | 1310 | 135 | 1190 | 2140 | 1460 | 321 | 459 | 1050 | 201 |
| 19 | 2190 | 1350 | 1460 | 1300 | 134 | 1180 | 2140 | 1460 | 219 | 471 | 1050 | 179 |
| 20 | 2190 | 1500 | 1460 | 1300 | 136 | 1180 | 2130 | 1460 | 193 | 461 | 1050 | 179 |
| 21 | 2190 | 1570 | 1460 | 1290 | 173 | 1170 | 2080 | 1460 | 199 | 473 | 1050 | 199 |
| 22 | 1950 | 1570 | 1450 | 1290 | 138 | 1170 | 1990 | 1460 | 215 | 484 | 1060 | 346 |
| 23 | 1460 | 1580 | 1440 | 1280 | 156 | 1170 | 1720 | 1450 | 551 | 428 | 1050 | 560 |
| 24 | 1500 | 1570 | 1440 | 1280 | 157 | 1170 | 1430 | 1450 | 956 | 563 | 1050 | 956 |
| 25 | 1580 | 1560 | 1440 | 1270 | 136 | 1170 | 1420 | 1450 | 956 | 778 | 1050 | 1410 |
| 26 | 1780 | 1550 | 1430 | 1270 | 135 | 1170 | 1430 | 1440 | 951 | 777 | 1040 | 1430 |
| 27 | 1770 | 1550 | 1430 | 1270 | 135 | 1170 | 1430 | 1200 | 811 | 954 | 1040 | 1400 |
| 28 | 1030 | 1550 | 1430 | 1270 | 167 | 945 | 1440 | 704 | 706 | 1070 | 767 | 1390 |
| 29 | 286 | 1550 | 1420 | 1260 | --- | 554 | 1450 | 703 | 705 | 1060 | 408 | 1400 |
| 30 | 496 | 1530 | 1420 | 1250 | --- | 467 | 1440 | 537 | 706 | 1060 | 298 | 1390 |
| 31 | 513 | --- | 1410 | 1250 | --- | 649 | --- | 230 | --- | 1060 | 299 | --- |
| TOTAL | 89775 | 41435 | 45640 | 41070 | 9466 | 21477 | 39713 | 36498 | 11548 | 20065 | 30292 | 15152 |
| MEAN | 2896 | 1381 | 1472 | 1325 | 338 | 693 | 1324 | 1177 | 385 | 647 | 977 | 505 |
| MAX | 6230 | 1580 | 1530 | 1400 | 1240 | 1190 | 2140 | 1470 | 956 | 1070 | 1070 | 1430 |
| MIN | 286 | 885 | 1410 | 1250 | 134 | 134 | 299 | 230 | 193 | 315 | 298 | 174 |

CAL YR 1985 TOTAL 443127 MEAN 1214 MAX 6230 MIN 86
WTR YR 1986 TOTAL 402131 MEAN 1102 MAX 6230 MIN 134

## 454724091303600 BIG SISSABAGAMA LAKE NEAR STONE LAKE, WI

LOCATION.--Lat 45°47'24", long 91°30'36", in NW 1/4 SE 1/4 sec.6, T.38 N., R.9 W., Sawyer County, Hydrologic Unit 07050001, near Stone Lake.

DRAINAGE AREA.--9.47 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--April 25 to September 30, 1986.

GAGE.--Staff gage read on south side of lake by Harold Kissinger. Elevation of gage is 1,320 ft, from topographic map.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 5.76 ft, Sept. 28; minimum observed, 5.14 ft, June 20, 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | --- | --- | 5.38 | 5.19 | 5.47 | 5.35 |
| 2 | | | | | | | --- | 5.50 | 5.36 | 5.18 | 5.46 | 5.35 |
| 3 | | | | | | | --- | 5.48 | 5.33 | 5.17 | 5.52 | 5.36 |
| 4 | | | | | | | --- | 5.51 | 5.31 | 5.29 | 5.54 | 5.36 |
| 5 | | | | | | | --- | 5.52 | 5.30 | 5.30 | 5.54 | 5.37 |
| 6 | | | | | | | --- | 5.52 | 5.28 | 5.32 | 5.55 | 5.36 |
| 7 | | | | | | | --- | 5.50 | 5.28 | 5.31 | 5.57 | 5.36 |
| 8 | | | | | | | --- | 5.50 | 5.28 | 5.32 | 5.49 | 5.36 |
| 9 | | | | | | | --- | 5.50 | 5.27 | 5.31 | 5.47 | 5.36 |
| 10 | | | | | | | --- | 5.51 | 5.26 | 5.28 | 5.46 | 5.37 |
| 11 | | | | | | | --- | 5.54 | 5.25 | 5.30 | 5.45 | 5.38 |
| 12 | | | | | | | --- | 5.54 | 5.24 | 5.33 | 5.43 | 5.38 |
| 13 | | | | | | | --- | 5.56 | 5.24 | 5.34 | 5.42 | 5.38 |
| 14 | | | | | | | --- | 5.60 | 5.21 | 5.35 | 5.43 | 5.40 |
| 15 | | | | | | | --- | 5.62 | 5.20 | 5.38 | 5.42 | 5.44 |
| 16 | | | | | | | --- | 5.62 | 5.19 | 5.42 | 5.41 | 5.46 |
| 17 | | | | | | | --- | 5.60 | 5.18 | 5.42 | 5.40 | 5.47 |
| 18 | | | | | | | --- | 5.60 | 5.17 | 5.42 | --- | 5.48 |
| 19 | | | | | | | --- | 5.58 | 5.15 | 5.64 | --- | 5.50 |
| 20 | | | | | | | --- | 5.56 | 5.14 | 5.64 | 5.40 | 5.51 |
| 21 | | | | | | | --- | 5.54 | 5.14 | 5.62 | 5.39 | 5.58 |
| 22 | | | | | | | --- | 5.52 | 5.23 | 5.59 | 5.39 | 5.62 |
| 23 | | | | | | | --- | 5.50 | 5.25 | 5.57 | 5.41 | 5.67 |
| 24 | | | | | | | --- | 5.48 | 5.28 | 5.55 | 5.41 | 5.69 |
| 25 | | | | | | | 5.46 | 5.48 | 5.27 | 5.54 | 5.40 | 5.73 |
| 26 | | | | | | | --- | 5.46 | 5.26 | 5.55 | 5.38 | 5.75 |
| 27 | | | | | | | --- | 5.45 | 5.25 | 5.56 | 5.38 | 5.75 |
| 28 | | | | | | | --- | 5.45 | 5.24 | 5.55 | 5.37 | 5.76 |
| 29 | | | | | | | --- | 5.45 | 5.23 | 5.54 | 5.36 | 5.74 |
| 30 | | | | | | | --- | 5.41 | 5.21 | 5.52 | 5.35 | 5.72 |
| 31 | | | | | | | --- | 5.40 | --- | 5.49 | 5.35 | --- |
| MEAN | | | | | | | --- | --- | 5.25 | 5.42 | --- | 5.50 |
| MAX | | | | | | | --- | --- | 5.38 | 5.64 | --- | 5.76 |
| MIN | | | | | | | --- | --- | 5.14 | 5.17 | --- | 5.35 |

454724091303600 BIG SISSABAGAMA LAKE NEAR STONE LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

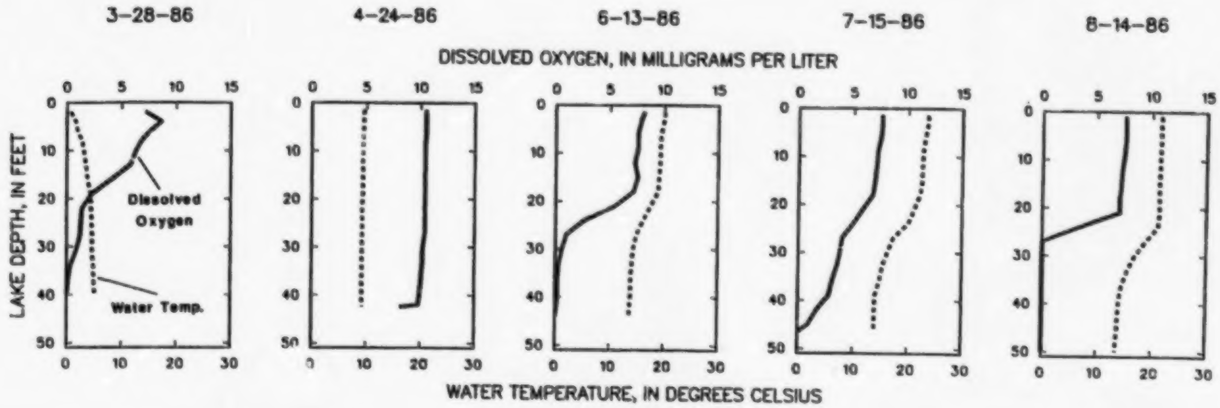
PERIOD OF RECORD.--March 28 to August 14, 1986.

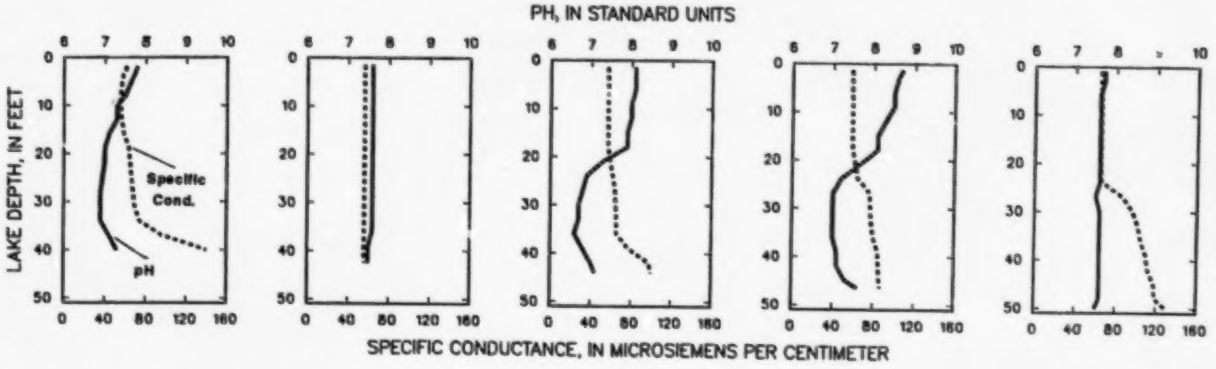
REMARKS.--Lake sampled near center at a depth of 45 ft.

WATER QUALITY DATA, MARCH 28 TO AUGUST 14, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 28 | | Apr. 24 | | June 13 | | July 15 | | Aug. 14 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 2.0 | 40.0 | 1.5 | 41.5 | 1.5 | 42.0 | 1.5 | 45.0 | 3.0 | 49.5 |
| Specific conductance (uS) | 61 | 140 | 56 | 56 | 57 | 98 | 59 | 86 | 65 | 119 |
| pH | 7.8 | 7.3 | 7.7 | 7.5 | 8.2 | 7.0 | 8.7 | 7.3 | 7.7 | 7.5 |
| Water temperature (°C) | 0.5 | 5.0 | 9.5 | 9.5 | 20.0 | 13.5 | 23.5 | 14.0 | 21.5 | 13.5 |
| Color (Pt-Co. scale) | -- | -- | 20 | 20 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 1.5 | 1.2 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- | -- | -- 2.1 -- | | -- 2.4 -- | | -- 1.7 -- | | -- 1.2 -- | |
| Dissolved oxygen | 7.2 | 0.0 | 10.5 | 8.2 | 8.2 | 0.1 | 7.6 | 0.9 | 7.6 | 0.0 |
| Hardness, as $CaCO_3$ | -- | -- | 28 | 27 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 7.5 | 7.1 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 2.3 | 2.2 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 1.3 | 1.2 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | .70 | .70 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 26 | 26 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 6.9 | 6.7 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | .80 | .80 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 8.8 | 8.7 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180°C | -- | -- | 52 | 51 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .19 | .19 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | <.010 | <.010 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .040 | .020 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .46 | .48 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | .70 | .70 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .026 | .022 | .017 | .062 | .025 | .093 | .022 | .290 |
| Phosphorus, ortho, diss (as P) | -- | -- | .002 | .003 | -- | -- | -- | .067 | -- | .280 |
| Iron, dissolved (Fe) ug/L | -- | -- | 200 | 150 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 39 | 40 | -- | -- | -- | -- | -- | -- |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 19[1/] | -- | 7 | -- | 11 | -- | 21 | -- |

[1/] Adjusted from 12 ug/L by Wisconsin State Laboratory of Hygiene.





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## 05356500 CHIPPEWA RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°27'08", long 91°15'39", in SE 1/4 sec.5, T.34 N., R.7 W., Rusk County, Hydrologic Unit 07050001, on right bank 1.0 mi east of Bruce and 1.0 mi downstream from Thornapple River.

DRAINAGE AREA.--1,650 mi$^2$.

PERIOD OF RECORD.--December 1913 to current year.

REVISED RECORDS.--WSP 875: 1936-38. WSP 1308: 1922, 1937(M). WSP 1508: 1914-26(M), 1927, 1928-31(M), 1932, 1933(M), 1934-36, 1938. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,059.62 ft above National Geodetic Vertical Datum of 1929. Prior to May 28, 1935, nonrecording gage at railroad bridge 0.8 mi upstream at datum 2.30 ft higher.

REMARKS.--Estimated daily discharges: Ice period listed in rating table below and Mar. 30 to Apr. 1. Records good except for estimated daily discharges, which are fair. Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa.

AVERAGE DISCHARGE.--72 years, 1,490 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft$^3$/s Sept. 1, 1941, gage height, 20.46 ft, from floodmarks, from rating curve extended above 20,000 ft$^3$/s; minimum, 155 ft$^3$/s June 10, 1932, gage height, 0.9 ft, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,500 ft$^3$/s Apr. 1, gage height, 15.18 ft; minimum, 370 ft$^3$/s June 17, gage height, 1.47 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 20 to Mar. 27.)

| | | | |
|---|---|---|---|
| 1.6 | 460 | 6.0 | 4,300 |
| 2.0 | 740 | 8.0 | 6,620 |
| 4.0 | 2,320 | 12.0 | 12,200 |
| | | 15.0 | 17,200 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5920 | 1460 | 2100 | 1800 | 1500 | 640 | 15000 | 3240 | 674 | 949 | 1600 | 579 |
| 2 | 6150 | 2660 | 2100 | 1800 | 1600 | 640 | 16200 | 2930 | 601 | 939 | 1550 | 605 |
| 3 | 5190 | 2690 | 2100 | 1800 | 1600 | 680 | 11600 | 2580 | 517 | 935 | 1520 | 682 |
| 4 | 6210 | 2450 | 2000 | 1800 | 1600 | 720 | 7810 | 2390 | 526 | 1020 | 1510 | 1040 |
| 5 | 14900 | 2350 | 2000 | 1800 | 1300 | 740 | 5540 | 2270 | 544 | 1350 | 1460 | 1050 |
| 6 | 15400 | 2270 | 2000 | 1800 | 1000 | 740 | 5170 | 2170 | 517 | 1430 | 2430 | 832 |
| 7 | 12500 | 2210 | 2000 | 1800 | 800 | 720 | 4760 | 2080 | 597 | 1350 | 2550 | 690 |
| 8 | 10800 | 2090 | 2000 | 1800 | 600 | 740 | 3760 | 2050 | 539 | 1130 | 2490 | 632 |
| 9 | 10100 | 1960 | 2000 | 1800 | 600 | 760 | 3050 | 2130 | 506 | 1070 | 2120 | 626 |
| 10 | 9460 | 1880 | 2000 | 1900 | 600 | 820 | 3120 | 1620 | 540 | 840 | 1820 | 991 |
| 11 | 8760 | 1780 | 2000 | 1900 | 600 | 860 | 3050 | 1300 | 590 | 631 | 1660 | 1270 |
| 12 | 7690 | 1780 | 2000 | 1800 | 600 | 960 | 3000 | 1470 | 746 | 1240 | 1550 | 1200 |
| 13 | 7690 | 1880 | 2000 | 1800 | 600 | 1100 | 2870 | 1760 | 637 | 1260 | 1500 | 933 |
| 14 | 7150 | 2050 | 2000 | 1800 | 600 | 1300 | 2830 | 3890 | 673 | 1110 | 1600 | 843 |
| 15 | 5020 | 2030 | 2000 | 1800 | 600 | 1500 | 3600 | 4740 | 511 | 1110 | 1700 | 1150 |
| 16 | 4410 | 2100 | 1900 | 1700 | 600 | 1700 | 3960 | 4470 | 538 | 1850 | 1600 | 1640 |
| 17 | 3880 | 2100 | 1900 | 1700 | 620 | 2100 | 3620 | 3730 | 489 | 1530 | 1520 | 1400 |
| 18 | 2910 | 2100 | 1900 | 1700 | 620 | 2300 | 3480 | 3090 | 555 | 1250 | 1470 | 1990 |
| 19 | 3350 | 2220 | 1900 | 1700 | 620 | 2300 | 3450 | 2600 | 655 | 4550 | 1420 | 1310 |
| 20 | 3260 | 2000 | 1900 | 1700 | 620 | 2300 | 3480 | 2390 | 501 | 5590 | 1390 | 1240 |
| 21 | 3190 | 2100 | 1900 | 1700 | 640 | 2400 | 3310 | 2170 | 526 | 3240 | 1380 | 1360 |
| 22 | 3160 | 2100 | 1900 | 1600 | 640 | 2400 | 3160 | 2060 | 910 | 1920 | 1390 | 3210 |
| 23 | 2690 | 2100 | 1900 | 1600 | 640 | 2500 | 2960 | 2000 | 896 | 1490 | 1450 | 4080 |
| 24 | 2370 | 2100 | 1900 | 1600 | 620 | 2500 | 2280 | 1960 | 1210 | 1280 | 1420 | 3260 |
| 25 | 2390 | 2200 | 1900 | 1600 | 620 | 2700 | 2200 | 1940 | 1330 | 1560 | 1400 | 3370 |
| 26 | 2430 | 2200 | 1900 | 1500 | 620 | 3100 | 2190 | 1920 | 1270 | 1570 | 1370 | 4340 |
| 27 | 2560 | 2200 | 1800 | 1500 | 620 | 3800 | 2290 | 1890 | 1250 | 1830 | 1340 | 4010 |
| 28 | 2490 | 2100 | 1800 | 1400 | 620 | 5250 | 2580 | 1470 | 1070 | 3280 | 1320 | 3450 |
| 29 | 1560 | 2100 | 1800 | 1500 | --- | 6780 | 3190 | 1120 | 974 | 2720 | 1020 | 2910 |
| 30 | 977 | 2100 | 1800 | 1500 | --- | 9200 | 3570 | 1030 | 955 | 2120 | 720 | 2690 |
| 31 | 1080 | --- | 1800 | 1500 | --- | 12000 | --- | 899 | --- | 1760 | 597 | --- |
| TOTAL | 175647 | 63360 | 60200 | 52700 | 22300 | 76250 | 137080 | 71359 | 21847 | 53904 | 47867 | 53383 |
| MEAN | 5666 | 2112 | 1942 | 1700 | 796 | 2460 | 4569 | 2302 | 728 | 1739 | 1544 | 1779 |
| MAX | 15400 | 2590 | 2100 | 1900 | 1600 | 12000 | 16200 | 4740 | 1330 | 5590 | 2550 | 4340 |
| MIN | 977 | 1460 | 1800 | 1400 | 600 | 640 | 2190 | 899 | 489 | 631 | 597 | 579 |

CAL YR 1985 TOTAL 839659 MEAN 2300 MAX 15400 MIN 520
WTR YR 1986 TOTAL 835897 MEAN 2290 MAX 16200 MIN 489

## 05360500 FLAMBEAU RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°22'21", long 91°12'34", in Lot 7 of NW 1/4 sec.2, T.33 N., R.7 W., Rusk County, Hydrologic Unit 07050002, on right bank 2.5 mi downstream from Thornapple Powerplant, 6.0 mi upstream from mouth, and 7.0 mi southeast of Bruce.

DRAINAGE AREA.--1,860 mi$^2$.

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage Reservoirs.

AVERAGE DISCHARGE.--35 years, 1,876 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft$^3$/s Apr. 2, 1986, gage height, 10.45 ft; maximum gage height, 10.90 ft May 1, 1954; minimum, about 100 ft$^3$/s Aug. 7, 9, 1957, gage height, 2.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,600 ft$^3$/s Apr. 2, gage height, 10.45 ft; minimum, 436 ft$^3$/s June 19, gage height, 2.46 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 23 to Mar. 31.)

| | | | |
|---|---|---|---|
| 2.6 | 526 | 5.0 | 3,480 |
| 3.0 | 833 | 7.0 | 7,660 |
| 4.0 | 1,920 | 9.0 | 13,200 |
| | | 11.0 | 19,400 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6800 | 2800 | 2100 | 1800 | 1300 | 1200 | 13500 | 4170 | 902 | 1290 | 1670 | 1220 |
| 2 | 6950 | 4020 | 2000 | 1800 | 1300 | 1200 | 17300 | 3520 | 865 | 1210 | 1610 | 1210 |
| 3 | 6730 | 5110 | 2100 | 1800 | 1300 | 1200 | 15900 | 2890 | 659 | 1260 | 1480 | 1280 |
| 4 | 8610 | 4940 | 2200 | 1700 | 1300 | 1200 | 13500 | 2610 | 574 | 1390 | 1540 | 1520 |
| 5 | 12100 | 4490 | 2300 | 1500 | 1300 | 1200 | 12000 | 2460 | 671 | 1720 | 1410 | 1490 |
| 6 | 11300 | 4420 | 2300 | 1300 | 1300 | 1300 | 9420 | 2360 | 954 | 2160 | 1720 | 1490 |
| 7 | 10500 | 4100 | 2400 | 1200 | 1300 | 1400 | 7870 | 2100 | 847 | 1990 | 1890 | 1530 |
| 8 | 9530 | 3810 | 2300 | 1300 | 1400 | 1300 | 7270 | 1980 | 782 | 1710 | 2550 | 1300 |
| 9 | 8300 | 3390 | 2400 | 1500 | 1300 | 1300 | 6780 | 2180 | 765 | 1160 | 1580 | 1300 |
| 10 | 6810 | 2850 | 2300 | 1700 | 1200 | 1400 | 5930 | 1850 | 849 | 1100 | 1760 | 2090 |
| 11 | 5950 | 2810 | 2200 | 1700 | 1200 | 1400 | 6020 | 2060 | 852 | 1240 | 1880 | 2590 |
| 12 | 6180 | 2690 | 2200 | 1600 | 1200 | 1500 | 4850 | 1990 | 1020 | 1500 | 1500 | 1790 |
| 13 | 5370 | 2720 | 2100 | 1500 | 1200 | 1500 | 3760 | 2260 | 900 | 1850 | 1230 | 1780 |
| 14 | 5540 | 2790 | 2100 | 1400 | 1100 | 1500 | 3660 | 2590 | 965 | 1710 | 1460 | 1730 |
| 15 | 5410 | 2680 | 2000 | 1400 | 1200 | 1500 | 3850 | 2620 | 836 | 1800 | 1590 | 2160 |
| 16 | 4900 | 2740 | 1900 | 1400 | 1200 | 1400 | 3250 | 2360 | 926 | 2400 | 1470 | 2390 |
| 17 | 5080 | 2810 | 1800 | 1400 | 1200 | 1500 | 4240 | 2110 | 864 | 2390 | 1390 | 2420 |
| 18 | 4940 | 2750 | 1900 | 1300 | 1200 | 1500 | 4080 | 1610 | 766 | 1800 | 1350 | 2460 |
| 19 | 4360 | 2580 | 2000 | 1300 | 1200 | 1400 | 3660 | 1560 | 764 | 2720 | 1380 | 2520 |
| 20 | 4300 | 3690 | 1900 | 1300 | 1200 | 1500 | 3420 | 1370 | 940 | 2510 | 1180 | 2210 |
| 21 | 3920 | 3600 | 1800 | 1300 | 1300 | 1500 | 3670 | 1510 | 1630 | 2040 | 1350 | 2470 |
| 22 | 3960 | 2850 | 1800 | 1300 | 1400 | 1400 | 3360 | 1320 | 3270 | 1960 | 1340 | 3590 |
| 23 | 3670 | 2600 | 1800 | 1300 | 1400 | 1400 | 2930 | 1130 | 2940 | 1660 | 1370 | 4610 |
| 24 | 2990 | 2400 | 1800 | 1300 | 1300 | 1500 | 2870 | 1040 | 2360 | 1430 | 1540 | 3480 |
| 25 | 3480 | 2200 | 1800 | 1300 | 1200 | 1600 | 2590 | 1100 | 1840 | 1950 | 1450 | 5340 |
| 26 | 3360 | 2100 | 1800 | 1300 | 1200 | 1800 | 2510 | 1200 | 1850 | 2380 | 1330 | 3990 |
| 27 | 2780 | 2100 | 1700 | 1200 | 1200 | 2000 | 2790 | 1300 | 1670 | 1990 | 1300 | 2950 |
| 28 | 2610 | 2200 | 1700 | 1200 | 1200 | 2300 | 2780 | 908 | 1650 | 1870 | 1400 | 3710 |
| 29 | 2750 | 2200 | 1700 | 1200 | --- | 3000 | 3290 | 1200 | 1950 | 2100 | 1280 | 3250 |
| 30 | 2650 | 2100 | 1700 | 1200 | --- | 3800 | 3570 | 1020 | 1930 | 1640 | 1240 | 2880 |
| 31 | 2260 | --- | 1700 | 1200 | --- | 5200 | --- | 873 | --- | 1860 | 1160 | --- |
| TOTAL | 174090 | 92540 | 61800 | 43700 | 35100 | 52900 | 180620 | 59251 | 37791 | 55790 | 46400 | 72750 |
| MEAN | 5616 | 3085 | 1994 | 1410 | 1254 | 1706 | 6021 | 1911 | 1260 | 1800 | 1497 | 2425 |
| MAX | 12100 | 5110 | 2400 | 1800 | 1400 | 5200 | 17300 | 4170 | 3270 | 2720 | 2550 | 5340 |
| MIN | 2260 | 2100 | 1700 | 1200 | 1100 | 1200 | 2510 | 873 | 574 | 1100 | 1160 | 1210 |

CAL YR 1985 TOTAL 988910 MEAN 2709 MAX 12100 MIN 640
WTR YR 1986 TOTAL 912732 MEAN 2501 MAX 17300 MIN 574

## 05362000 JUMP RIVER AT SHELDON, WI

LOCATION.--Lat 45°18'29", long 90°57'23", in sec.26, T.33 N., R.5 W., Rusk County, Hydrologic Unit 07050004, on right bank just downstream from highway bridge in Sheldon, 1,500 ft upstream from Shoulder Creek and 11 mi upstream from mouth.

DRAINAGE AREA.--576 mi$^2$.

PERIOD OF RECORD.--July 1915 to current year.

REVISED RECORDS.--WSP 975: 1938. WSP 1175: Drainage area. WSP 1438: 1916-17(M), 1919(M), 1920, 1921(M), 1922, 1923-26(M), 1927, 1928-31(M), 1932, 1933-37(M), 1945-46(M), 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.75 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1939, and Sept. 1, 1941, to Apr. 1, 1953, Feb. 18, 1954, to Sept. 27, 1964, nonrecording gage at same site and datum. Apr. 2, 1953, to Feb. 18, 1954, nonrecording gage in creamery wellhouse 400 ft upstream at same datum. Feb. 9, 1939, to Aug. 31, 1941, and from Sept. 27, 1964, water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair. Data-collection platform at station.

AVERAGE DISCHARGE.--71 years, 524 ft$^3$/s, 12.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 46,000 ft$^3$/s Aug. 31, 1941, gage height, 18.8 ft from floodmark, from rating curve extended above 13,000 ft$^3$/s on basis of contracted-opening measurement of peak flow; minimum observed, 11 ft$^3$/s Dec. 18, 1943, gage height, 3.99 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 1 | 1200 | 4,570 | 8.83 | Sept. 23 | 0100 | 4,200 | 8.59 |
| Oct. 5 | 1500 | 7,680 | 10.38 | Sept. 28 | 1000 | 6,450 | 9.73 |
| Apr. 1 | 2400 | *14,000 | *12.47 | | | | |

Minimum discharge, 64 ft$^3$/s June 10, gage height 3.18 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 28-30; stage-discharge relation affected by ice Nov. 9-11, Nov. 21 to Mar. 28.)

| | | | |
|---|---|---|---|
| 3.1 | 52 | 6.0 | 1,300 |
| 3.5 | 126 | 7.0 | 2,180 |
| 4.0 | 252 | 9.0 | 4,850 |
| 4.5 | 443 | 11.0 | 9,300 |
| 5.0 | 685 | 13.0 | 16,200 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4460 | 594 | 300 | 160 | 160 | 140 | 12900 | 1630 | 81 | 194 | 402 | 94 |
| 2 | 4000 | 2440 | 290 | 160 | 150 | 140 | 12700 | 1220 | 77 | 170 | 322 | 89 |
| 3 | 2890 | 2520 | 280 | 160 | 150 | 140 | 7480 | 888 | 72 | 148 | 295 | 87 |
| 4 | 3530 | 1900 | 270 | 160 | 150 | 150 | 4420 | 675 | 68 | 150 | 256 | 100 |
| 5 | 7180 | 1440 | 270 | 160 | 150 | 150 | 3350 | 541 | 79 | 154 | 216 | 286 |
| 6 | 7010 | 1150 | 260 | 160 | 150 | 140 | 3260 | 446 | 76 | 192 | 269 | 270 |
| 7 | 4950 | 995 | 250 | 150 | 150 | 140 | 2930 | 367 | 73 | 195 | 362 | 234 |
| 8 | 3520 | 862 | 250 | 150 | 150 | 140 | 2350 | 310 | 67 | 170 | 410 | 187 |
| 9 | 2780 | 700 | 240 | 150 | 150 | 140 | 1760 | 277 | 66 | 150 | 367 | 190 |
| 10 | 2110 | 560 | 240 | 150 | 150 | 140 | 1320 | 255 | 66 | 134 | 293 | 1080 |
| 11 | 1640 | 440 | 230 | 160 | 150 | 140 | 1020 | 250 | 86 | 153 | 250 | 3060 |
| 12 | 1430 | 475 | 230 | 160 | 150 | 150 | 838 | 304 | 109 | 228 | 218 | 2870 |
| 13 | 1610 | 434 | 220 | 170 | 140 | 180 | 704 | 338 | 149 | 313 | 189 | 2100 |
| 14 | 1500 | 411 | 220 | 170 | 140 | 200 | 621 | 423 | 141 | 290 | 215 | 1410 |
| 15 | 1250 | 384 | 210 | 170 | 140 | 230 | 784 | 420 | 118 | 233 | 333 | 1440 |
| 16 | 1030 | 384 | 210 | 170 | 140 | 260 | 989 | 344 | 100 | 1020 | 462 | 2010 |
| 17 | 872 | 376 | 210 | 170 | 140 | 300 | 911 | 285 | 87 | 1720 | 669 | 1770 |
| 18 | 781 | 381 | 200 | 170 | 140 | 340 | 767 | 242 | 77 | 1120 | 373 | 1740 |
| 19 | 701 | 589 | 200 | 170 | 140 | 400 | 686 | 210 | 70 | 1630 | 267 | 1510 |
| 20 | 590 | 917 | 190 | 170 | 140 | 380 | 645 | 191 | 67 | 1650 | 208 | 1360 |
| 21 | 529 | 660 | 190 | 170 | 140 | 540 | 635 | 174 | 158 | 1020 | 182 | 1580 |
| 22 | 472 | 520 | 190 | 170 | 140 | 560 | 571 | 156 | 354 | 687 | 161 | 3290 |
| 23 | 450 | 460 | 180 | 170 | 140 | 600 | 467 | 144 | 399 | 489 | 156 | 3990 |
| 24 | 463 | 430 | 180 | 170 | 140 | 680 | 406 | 140 | 357 | 439 | 152 | 3150 |
| 25 | 467 | 400 | 170 | 160 | 140 | 800 | 362 | 134 | 301 | 761 | 152 | 2380 |
| 26 | 421 | 380 | 170 | 160 | 140 | 1400 | 348 | 125 | 246 | 660 | 148 | 2260 |
| 27 | 371 | 360 | 170 | 160 | 140 | 2100 | 437 | 118 | 232 | 520 | 140 | 4310 |
| 28 | 349 | 340 | 170 | 160 | 140 | 3000 | 567 | 109 | 302 | 680 | 123 | 6190 |
| 29 | 334 | 330 | 170 | 160 | --- | 4850 | 813 | 99 | 286 | 796 | 111 | 4740 |
| 30 | 317 | 310 | 160 | 160 | --- | 8650 | 1400 | 94 | 229 | 662 | 104 | 2990 |
| 31 | 302 | --- | 160 | 160 | --- | 11400 | --- | 89 | --- | 516 | 98 | --- |
| TOTAL | 58309 | 22142 | 6680 | 5040 | 4050 | 38580 | 66441 | 10998 | 4593 | 17244 | 7903 | 56767 |
| MEAN | 1881 | 738 | 215 | 163 | 145 | 1245 | 2215 | 355 | 153 | 556 | 255 | 1892 |
| MAX | 7180 | 2520 | 300 | 170 | 160 | 11400 | 12900 | 1630 | 399 | 1720 | 669 | 6190 |
| MIN | 302 | 310 | 160 | 150 | 140 | 140 | 348 | 89 | 66 | 134 | 98 | 87 |
| CFSM | 3.27 | 1.28 | .37 | .28 | .25 | 2.16 | 3.85 | .62 | .27 | .97 | .44 | 3.29 |
| IN. | 3.77 | 1.43 | .43 | .33 | .26 | 2.49 | 4.29 | .71 | .30 | 1.11 | .51 | 3.67 |

CAL YR 1985 TOTAL 281951 MEAN 772 MAX 7180 MIN 50 CFSM 1.34 IN 18.21
WTR YR 1986 TOTAL 298747 MEAN 818 MAX 12900 MIN 66 CFSM 1.42 IN 19.29

## 05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI

LOCATION.--Lat 44°58'25", long 90°50'57", in NW 1/4 NE 1/4 sec.27, T.29 N., R.4 W., Clark County, Hydrologic Unit 07050006, on left bank 15 ft downstream from town road, 0.3 mi downstream from Goggle-Eye Creek, and 2.6 mi northwest of Thorp.

DRAINAGE AREA.--51.0 mi$^2$.

PERIOD OF RECORD.--April to September 1986.

GAGE.--Water-stage recorder. Elevation of gage is 1,115 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 1-10. Records good except for estimated daily discharges, which are fair to poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 9,050 ft$^3$/s Sept. 22, gage height, 10.13 ft, from rating curve extended above 2,500 ft$^3$/s on basis of step-backwater measurement of peak flow; minimum, 2.9 ft$^3$/s June 10, gage height, 1.30 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

Apr. 11 to Sept. 30

| | | | |
|---|---|---|---|
| 1.3 | 2.9 | 3.5 | 258 |
| 1.4 | 5.3 | 4.0 | 400 |
| 1.6 | 12 | 5.0 | 800 |
| 2.0 | 36 | 6.0 | 1,430 |
| 2.5 | 85 | 7.0 | 2,520 |
| 3.0 | 156 | 8.0 | 4,030 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | 640 | 72 | 4.6 | 6.6 | 18 | 7.0 |
| 2 | | | | | | | 360 | 51 | 4.1 | 5.8 | 31 | 6.6 |
| 3 | | | | | | | 220 | 34 | 4.0 | 7.0 | 29 | 6.5 |
| 4 | | | | | | | 130 | 24 | 4.2 | 20 | 17 | 9.7 |
| 5 | | | | | | | 120 | 19 | 5.0 | 22 | 12 | 9.5 |
| 6 | | | | | | | 110 | 16 | 5.0 | 43 | 28 | 7.6 |
| 7 | | | | | | | 88 | 12 | 4.8 | 35 | 65 | 6.3 |
| 8 | | | | | | | 62 | 11 | 3.8 | 21 | 362 | 5.5 |
| 9 | | | | | | | 47 | 11 | 3.2 | 14 | 304 | 9.2 |
| 10 | | | | | | | 38 | 10 | 3.1 | 11 | 138 | 286 |
| 11 | | | | | | | 29 | 10 | 18 | 30 | 63 | 390 |
| 12 | | | | | | | 25 | 10 | 14 | 75 | 39 | 146 |
| 13 | | | | | | | 23 | 11 | 15 | 65 | 31 | 98 |
| 14 | | | | | | | 38 | 13 | 9.9 | 47 | 1420 | 56 |
| 15 | | | | | | | 63 | 13 | 7.2 | 26 | 692 | 123 |
| 16 | | | | | | | 77 | 11 | 5.8 | 23 | 438 | 94 |
| 17 | | | | | | | 57 | 10 | 4.3 | 19 | 310 | 95 |
| 18 | | | | | | | 42 | 9.4 | 4.1 | 14 | 133 | 93 |
| 19 | | | | | | | 34 | 8.4 | 3.9 | 32 | 72 | 157 |
| 20 | | | | | | | 29 | 7.5 | 3.7 | 46 | 45 | 157 |
| 21 | | | | | | | 25 | 6.9 | 6.1 | 31 | 33 | 545 |
| 22 | | | | | | | 20 | 6.5 | 32 | 20 | 26 | 3670 |
| 23 | | | | | | | 18 | 6.8 | 27 | 15 | 24 | 1170 |
| 24 | | | | | | | 16 | 7.2 | 21 | 212 | 20 | 473 |
| 25 | | | | | | | 14 | 7.8 | 14 | 290 | 17 | 480 |
| 26 | | | | | | | 18 | 7.4 | 10 | 139 | 16 | 627 |
| 27 | | | | | | | 21 | 6.9 | 16 | 70 | 15 | 2330 |
| 28 | | | | | | | 19 | 6.3 | 15 | 98 | 12 | 951 |
| 29 | | | | | | | 43 | 5.9 | 13 | 45 | 9.5 | 414 |
| 30 | | | | | | | 93 | 4.9 | 8.6 | 29 | 8.4 | 177 |
| 31 | | | | | | | --- | 4.8 | --- | 21 | 7.6 | --- |
| TOTAL | | | | | | | 2519 | 434.7 | 290.4 | 1532.4 | 4435.5 | 12599.9 |
| MEAN | | | | | | | 84.0 | 14.0 | 9.68 | 49.4 | 143 | 420 |
| MAX | | | | | | | 640 | 72 | 32 | 290 | 1420 | 3670 |
| MIN | | | | | | | 14 | 4.8 | 3.1 | 5.8 | 7.6 | 5.5 |
| CFSM | | | | | | | 1.65 | .28 | .19 | .97 | 2.80 | 8.24 |
| IN. | | | | | | | 1.84 | .32 | .21 | 1.12 | 3.24 | 9.19 |

## 05368000 HAY RIVER AT WHEELER, WI

**LOCATION.**--Lat 45°02'52", long 91°54'39", in SW 1/4 sec.25, T.30 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank 25 ft downstream from highway bridge in Wheeler, 1.8 mi upstream from Otter Creek, and 2.4 mi downstream from South Fork Hay River.

**DRAINAGE AREA.**--418 mi$^2$.

**PERIOD OF RECORD.**--October 1950 to current year.

**REVISED RECORDS.**--WDR WI-81-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 889.30 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1951, nonrecording gage.

**REMARKS.**--Estimated daily discharges: None, except ice period listed in rating table below. Records good except for ice-affected period, which is fair.

**AVERAGE DISCHARGE.**--36 years, 311 ft$^3$/s, 10.10 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 13,600 ft$^3$/s Mar. 31, 1967, gage height, 15.04 ft, from rating curve extended above 9,000 ft$^3$/s; minimum, 55 ft$^3$/s Mar. 13, 1954, gage height, 2.32 ft, result of freezeup.

**EXTREMES OUTSIDE OF PERIOD OF RECORD.**--Maximum stage since 1915, 16.6 ft April 1934, from floodmarks.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct 6 | 0300 | 1,820 | 7.83 | Sept. 23 | 0100 | *5,340 | *11.56 |
| Mar. 30 | 0900 | 2,780 | 9.28 | | | | |

Minimum daily discharge, 200 ft$^3$/s, Mar. 7, result of freezeup.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 20 to Mar. 24.)

| Oct. 1 to Mar. 29 | | | | Mar. 30 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 3.1 | 191 | 6.0 | 970 | 3.4 | 227 | 7.0 | 1,360 |
| 3.5 | 263 | 7.0 | 1,380 | 4.0 | 348 | 9.0 | 2,560 |
| 4.0 | 369 | 8.0 | 1,920 | 5.0 | 600 | 11.0 | 4,480 |
| 5.0 | 630 | | | 6.0 | 930 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 631 | 377 | 280 | 270 | 280 | 260 | 2060 | 657 | 292 | 271 | 286 | 253 |
| 2 | 498 | 405 | 290 | 270 | 270 | 250 | 1910 | 511 | 277 | 269 | 278 | 249 |
| 3 | 432 | 374 | 300 | 260 | 270 | 250 | 1160 | 445 | 276 | 266 | 270 | 253 |
| 4 | 587 | 353 | 300 | 260 | 270 | 240 | 885 | 416 | 277 | 274 | 263 | 284 |
| 5 | 1480 | 342 | 300 | 260 | 270 | 240 | 857 | 396 | 279 | 296 | 260 | 281 |
| 6 | 1670 | 335 | 300 | 260 | 270 | 230 | 1030 | 378 | 274 | 314 | 261 | 262 |
| 7 | 1090 | 333 | 300 | 250 | 270 | 200 | 901 | 365 | 273 | 293 | 277 | 253 |
| 8 | 858 | 329 | 290 | 250 | 260 | 230 | 751 | 397 | 271 | 274 | 387 | 248 |
| 9 | 802 | 320 | 290 | 250 | 260 | 240 | 645 | 565 | 264 | 269 | 337 | 260 |
| 10 | 653 | 314 | 280 | 260 | 260 | 240 | 581 | 564 | 258 | 262 | 294 | 693 |
| 11 | 578 | 311 | 280 | 280 | 260 | 240 | 535 | 513 | 265 | 293 | 275 | 1210 |
| 12 | 564 | 305 | 280 | 280 | 260 | 250 | 503 | 582 | 267 | 449 | 261 | 1180 |
| 13 | 501 | 305 | 280 | 280 | 250 | 250 | 480 | 536 | 264 | 397 | 256 | 545 |
| 14 | 564 | 306 | 270 | 270 | 250 | 260 | 492 | 708 | 258 | 363 | 330 | 432 |
| 15 | 522 | 303 | 270 | 260 | 260 | 260 | 677 | 613 | 254 | 326 | 499 | 511 |
| 16 | 493 | 299 | 270 | 260 | 260 | 270 | 650 | 539 | 250 | 320 | 430 | 581 |
| 17 | 466 | 305 | 280 | 270 | 260 | 290 | 536 | 461 | 243 | 300 | 372 | 482 |
| 18 | 452 | 303 | 280 | 270 | 250 | 320 | 489 | 419 | 240 | 283 | 369 | 450 |
| 19 | 437 | 307 | 280 | 280 | 250 | 440 | 479 | 395 | 239 | 328 | 311 | 437 |
| 20 | 421 | 340 | 280 | 260 | 240 | 430 | 473 | 378 | 236 | 406 | 291 | 524 |
| 21 | 410 | 310 | 280 | 250 | 240 | 410 | 448 | 364 | 251 | 356 | 284 | 679 |
| 22 | 404 | 300 | 270 | 250 | 240 | 400 | 420 | 352 | 512 | 326 | 279 | 2870 |
| 23 | 405 | 290 | 270 | 250 | 240 | 430 | 404 | 343 | 645 | 304 | 283 | 3950 |
| 24 | 402 | 290 | 270 | 250 | 240 | 540 | 390 | 340 | 399 | 300 | 283 | 1540 |
| 25 | 390 | 280 | 270 | 260 | 250 | 580 | 388 | 362 | 343 | 363 | 279 | 936 |
| 26 | 380 | 270 | 270 | 250 | 250 | 1030 | 383 | 354 | 318 | 309 | 278 | 899 |
| 27 | 371 | 270 | 270 | 260 | 260 | 1380 | 401 | 340 | 314 | 347 | 274 | 765 |
| 28 | 359 | 270 | 270 | 270 | 250 | 1070 | 497 | 327 | 299 | 483 | 265 | 660 |
| 29 | 353 | 270 | 270 | 280 | --- | 1730 | 711 | 319 | 280 | 371 | 260 | 595 |
| 30 | 347 | 280 | 270 | 280 | --- | 2580 | 662 | 288 | 274 | 327 | 258 | 565 |
| 31 | 343 | --- | 270 | 280 | --- | 2320 | --- | 290 | --- | 304 | 258 | --- |
| TOTAL | 17963 | 9396 | 8680 | 8180 | 7190 | 17860 | 20798 | 13517 | 8892 | 10043 | 9308 | 22847 |
| MEAN | 579 | 313 | 280 | 264 | 257 | 576 | 693 | 436 | 296 | 324 | 300 | 762 |
| MAX | 1670 | 405 | 300 | 280 | 280 | 2580 | 2060 | 708 | 645 | 483 | 499 | 3950 |
| MIN | 343 | 270 | 270 | 250 | 240 | 200 | 383 | 288 | 236 | 262 | 256 | 248 |
| CFSM | 1.39 | .75 | .67 | .63 | .62 | 1.38 | 1.66 | 1.04 | .71 | .78 | .72 | 1.82 |
| IN. | 1.60 | .84 | .77 | .73 | .64 | 1.59 | 1.85 | 1.20 | .79 | .89 | .83 | 2.03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CAL YR 1985 | TOTAL 140182 | MEAN 384 | MAX 1860 | MIN 194 | CFSM .92 | IN 12.48 |
| WTR YR 1986 | TOTAL 154674 | MEAN 424 | MAX 3950 | MIN 200 | CFSM 1.01 | IN 13.77 |

## 05369000 RED CEDAR RIVER AT MENOMONIE, WI

LOCATION.--Lat 44°53'02", long 91°55'57", in NW 1/4 sec.26, T.28 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank at Menomonie, 900 ft downstream from powerplant of Northern States Power Co., and 1,000 ft downstream from Wilson Creek.

DRAINAGE AREA.--1,770 mi$^2$.

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780 ft above National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft lower than present datum.

REMARKS.--Estimated daily discharges: Nov. 25 to Jan. 10, Mar. 30 to Apr. 2. Records good except for periods of estimated discharge, which are fair. Flow regulated by powerplants at Menomonie and Cedar Falls.

AVERAGE DISCHARGE.--74 years, 1,280 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft$^3$/s Apr. 4, 1934, gage height, 16.0 ft, from floodmarks, from rating curve extended above 27,000 ft$^3$/s on basis of computed flow over Cedar Falls Dam 6 mi upstream; minimum, less than 10 ft$^3$/s July 3, 1985, gage height, 0.46 ft, result of temporary powerplant shutdown at request of Dunn County Sheriff's Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,760 ft$^3$/s Sept. 23, gage height, 5.79 ft; minimum, 14 ft$^3$/s Jan. 28, gage height, 0.62 ft; minimum daily, 560 ft$^3$/s Nov. 26.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 1.6 | 489 | 3.0 | 2,340 |
| 2.0 | 865 | 4.0 | 4,190 |
| 2.5 | 1,540 | 5.0 | 6,600 |
| | | 6.0 | 9,400 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2760 | 1750 | 1260 | 1300 | 1060 | 1090 | 6900 | 2380 | 1250 | 883 | 1610 | 904 |
| 2 | 2470 | 1920 | 925 | 1120 | 1080 | 1200 | 7800 | 2720 | 1050 | 1190 | 1440 | 1070 |
| 3 | 2160 | 1890 | 840 | 1310 | 1070 | 1150 | 6620 | 2280 | 1340 | 958 | 1280 | 1170 |
| 4 | 2650 | 1810 | 1050 | 1240 | 1110 | 1240 | 5820 | 2240 | 1030 | 1250 | 1220 | 1180 |
| 5 | 4170 | 1740 | 1160 | 1360 | 1110 | 1220 | 5110 | 2060 | 1260 | 1130 | 1290 | 1190 |
| 6 | 5130 | 1750 | 1260 | 955 | 1110 | 1090 | 4530 | 1640 | 1190 | 1550 | 1310 | 1080 |
| 7 | 6450 | 1670 | 1160 | 1080 | 1290 | 965 | 4440 | 1930 | 1160 | 1400 | 1310 | 1130 |
| 8 | 5180 | 1630 | 1350 | 1160 | 1110 | 1050 | 4140 | 1880 | 1130 | 1380 | 1390 | 1150 |
| 9 | 4810 | 1650 | 1580 | 1140 | 1070 | 1270 | 3480 | 2270 | 1140 | 1090 | 1310 | 1290 |
| 10 | 4380 | 1580 | 1380 | 1100 | 1000 | 1210 | 3150 | 2230 | 1350 | 1270 | 1210 | 1990 |
| 11 | 3920 | 1660 | 1320 | 1110 | 1010 | 1310 | 3060 | 2340 | 1350 | 1270 | 1140 | 3290 |
| 12 | 3550 | 1570 | 1380 | 1150 | 862 | 1170 | 2800 | 2310 | 1300 | 2000 | 1110 | 3130 |
| 13 | 3050 | 1550 | 1360 | 1140 | 1090 | 1320 | 2560 | 2540 | 1180 | 1870 | 1050 | 2320 |
| 14 | 2960 | 1510 | 1260 | 1160 | 886 | 1750 | 2480 | 2780 | 1060 | 1530 | 1650 | 1760 |
| 15 | 2910 | 1550 | 1200 | 1160 | 1040 | 1820 | 2490 | 3080 | 1170 | 1470 | 1850 | 1950 |
| 16 | 2790 | 1510 | 1300 | 1160 | 1090 | 1910 | 2340 | 2550 | 1080 | 1330 | 1790 | 2280 |
| 17 | 2720 | 1540 | 1020 | 1090 | 1070 | 2100 | 2520 | 2470 | 1050 | 1250 | 1400 | 2150 |
| 18 | 2410 | 1550 | 1080 | 1100 | 1020 | 2350 | 2330 | 2430 | 1000 | 1460 | 1480 | 2160 |
| 19 | 2300 | 1580 | 1260 | 1170 | 1260 | 2360 | 2400 | 2200 | 1050 | 1540 | 1300 | 2070 |
| 20 | 1880 | 1810 | 1160 | 1280 | 1100 | 1980 | 2470 | 1620 | 823 | 1880 | 1200 | 2140 |
| 21 | 1680 | 1230 | 1120 | 1110 | 942 | 2340 | 2510 | 1840 | 1170 | 1920 | 1160 | 2800 |
| 22 | 796 | 1270 | 1120 | 1180 | 1070 | 1450 | 2410 | 1610 | 1810 | 1700 | 1170 | 5810 |
| 23 | 1030 | 1330 | 970 | 1100 | 1020 | 2130 | 2410 | 1300 | 2300 | 1770 | 975 | 7960 |
| 24 | 840 | 1220 | 1060 | 1080 | 1140 | 2070 | 2000 | 1370 | 1750 | 1710 | 1060 | 6060 |
| 25 | 1740 | 740 | 1020 | 1110 | 997 | 2150 | 1270 | 1400 | 1610 | 1770 | 1330 | 4440 |
| 26 | 1680 | 560 | 1300 | 1060 | 1140 | 2430 | 605 | 1480 | 1530 | 1840 | 1090 | 3610 |
| 27 | 1560 | 1140 | 1160 | 937 | 1020 | 2400 | 826 | 1360 | 1350 | 1970 | 971 | 3340 |
| 28 | 1660 | 990 | 1220 | 976 | 1090 | 2370 | 1730 | 1320 | 1310 | 2130 | 1010 | 3530 |
| 29 | 1540 | 1020 | 1220 | 1020 | --- | 3310 | 2180 | 1310 | 1160 | 1910 | 1030 | 3040 |
| 30 | 1560 | 1140 | 900 | 1020 | --- | 4650 | 2880 | 1140 | 1210 | 1570 | 1080 | 2260 |
| 31 | 1610 | --- | 1140 | 1170 | --- | 8400 | --- | 1220 | --- | 1560 | 1060 | --- |
| TOTAL | 84346 | 43860 | 36535 | 35048 | 29857 | 63255 | 96261 | 61300 | 38163 | 47551 | 39276 | 78254 |
| MEAN | 2721 | 1462 | 1179 | 1131 | 1066 | 2040 | 3209 | 1977 | 1272 | 1534 | 1267 | 2608 |
| MAX | 6450 | 1920 | 1580 | 1360 | 1290 | 8400 | 7800 | 3080 | 2300 | 2130 | 1850 | 7960 |
| MIN | 796 | 560 | 840 | 937 | 862 | 965 | 605 | 1140 | 823 | 883 | 971 | 904 |

CAL YR 1985 TOTAL 580121 MEAN 1589 MAX 6450 MIN 560
WTR YR 1986 TOTAL 653706 MEAN 1791 MAX 8400 MIN 560

## 05369500 CHIPPEWA RIVER AT DURAND, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°37'40", long 91°58'10", in SW 1/4 sec.21, T.25 N., R.13 W., Pepin County, Hydrologic Unit 07050005, on left bank in Durand, 75 ft downstream from bridge on U.S. Highway 10, and 9.5 mi downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M), 1932. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except for ice-affected period, which is fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter and data-collection platform at station.

AVERAGE DISCHARGE.--58 years, 7,732 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft$^3$/s Apr. 2, 1967, gage height, 16.93 ft; minimum observed, 1,020 ft$^3$/s Nov. 24, 1950, gage height, 0.12 ft.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 18.4 ft, from flood marks (levels by U.S. Army Corps of Engineers) occurred Sept. 12, 1884, and has not been exceeded since.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68,500 ft$^3$/s Apr. 4, gage height, 13.80 ft; minimum discharge, 2,490 ft$^3$/s June 8, gage height, 0.87 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 3-15, June 1-9, 15-21, Aug. 26 to Sept. 6; stage-discharge relation affected by ice Nov. 26 to Mar. 29.)

| Oct. 1 to Apr. 15, Sept. 7-30 | | | | Apr. 16 to Sept. 6 | |
|---|---|---|---|---|---|
| 1.0 | 2,650 | 8.0 | 22,400 | 1.0 | 2,960 |
| 2.0 | 4,360 | 10.0 | 31,800 | 2.0 | 4,790 |
| 4.0 | 9,150 | 12.0 | 45,000 | 4.0 | 9,820 |
| 6.0 | 15,100 | 14.0 | 70,100 | 7.0 | 19,700 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17100 | 7780 | 8000 | 9200 | 5800 | 4900 | 49700 | 15800 | 4060 | 6430 | 10200 | 4710 |
| 2 | 23600 | 9190 | 8600 | 9400 | 5400 | 4400 | 55500 | 15300 | 3590 | 6370 | 8800 | 4420 |
| 3 | 24900 | 12800 | 8400 | 9400 | 4500 | 3200 | 64300 | 14500 | 4430 | 6320 | 7150 | 5240 |
| 4 | 23200 | 16700 | 8200 | 8800 | 5000 | 3400 | 66300 | 12100 | 3810 | 5370 | 8010 | 5060 |
| 5 | 26500 | 15800 | 8600 | 7000 | 5800 | 3900 | 52900 | 10600 | 3800 | 5710 | 7980 | 4610 |
| 6 | 37500 | 12600 | 9000 | 7800 | 6200 | 4700 | 41500 | 9910 | 3490 | 8230 | 7160 | 5300 |
| 7 | 45500 | 12200 | 8400 | 7800 | 6200 | 4900 | 32700 | 9270 | 3330 | 9320 | 6290 | 4690 |
| 8 | 48300 | 12400 | 8000 | 8000 | 4900 | 4700 | 30000 | 9090 | 2990 | 8180 | 10000 | 4280 |
| 9 | 42000 | 11000 | 8800 | 8400 | 4800 | 4400 | 22700 | 7860 | 3280 | 8010 | 10800 | 5350 |
| 10 | 34000 | 10100 | 9800 | 7400 | 3800 | 4300 | 20100 | 10300 | 4440 | 5960 | 10200 | 6340 |
| 11 | 29600 | 9720 | 10000 | 7000 | 4000 | 4700 | 19400 | 8870 | 4980 | 6040 | 8530 | 11400 |
| 12 | 22300 | 8930 | 8800 | 7400 | 4500 | 5200 | 17600 | 9100 | 4870 | 6840 | 8210 | 17600 |
| 13 | 26100 | 7740 | 9000 | 7200 | 4200 | 5600 | 16400 | 9840 | 5280 | 7680 | 7450 | 19000 |
| 14 | 21300 | 8140 | 9000 | 6400 | 3900 | 5800 | 14700 | 9910 | 4540 | 8550 | 7980 | 14900 |
| 15 | 21200 | 8940 | 8800 | 5600 | 3600 | 6200 | 14200 | 11900 | 3880 | 10000 | 11100 | 12100 |
| 16 | 18900 | 8970 | 9200 | 6000 | 3600 | 6400 | 14300 | 14200 | 3200 | 8220 | 14200 | 13500 |
| 17 | 16500 | 9040 | 9400 | 6400 | 3900 | 7000 | 14700 | 13900 | 3950 | 10000 | 16800 | 14300 |
| 18 | 16500 | 8660 | 9000 | 6600 | 4300 | 8000 | 14800 | 11600 | 3870 | 11800 | 15000 | 14300 |
| 19 | 14000 | 9000 | 8600 | 5600 | 4400 | 9400 | 16900 | 9460 | 4290 | 11600 | 10500 | 13800 |
| 20 | 12600 | 10300 | 8800 | 5000 | 4400 | 10000 | 14300 | 8910 | 4400 | 11400 | 9580 | 13700 |
| 21 | 12500 | 10900 | 9000 | 5600 | 4500 | 9800 | 13900 | 8840 | 3800 | 14300 | 8420 | 13800 |
| 22 | 11800 | 10700 | 9200 | 6400 | 4600 | 10000 | 13400 | 7740 | 4870 | 14600 | 7390 | 23400 |
| 23 | 10700 | 9870 | 8800 | 6400 | 4600 | 9000 | 12200 | 7150 | 7840 | 10700 | 6830 | 43300 |
| 24 | 10200 | 8860 | 8200 | 6200 | 4400 | 7600 | 11900 | 7020 | 9610 | 8320 | 5770 | 52400 |
| 25 | 9810 | 7560 | 8800 | 6200 | 4200 | 5400 | 10700 | 5300 | 7240 | 8190 | 6650 | 47700 |
| 26 | 9310 | 7600 | 9200 | 5400 | 4300 | 9000 | 9180 | 5470 | 6920 | 11300 | 7000 | 34600 |
| 27 | 9550 | 7400 | 9400 | 4200 | 4500 | 12000 | 7350 | 6410 | 8730 | 12500 | 5780 | 30600 |
| 28 | 8940 | 7600 | 9400 | 4500 | 4900 | 14000 | 10500 | 6740 | 9860 | 12800 | 6080 | 32000 |
| 29 | 9570 | 7400 | 9000 | 5800 | --- | 15000 | 11600 | 6530 | 6880 | 13500 | 5910 | 34200 |
| 30 | 8550 | 7600 | 8200 | 5800 | --- | 24700 | 13200 | 5740 | 7820 | 13600 | 5750 | 32700 |
| 31 | 8510 | --- | 8600 | 6000 | --- | 38400 | --- | 5380 | --- | 12100 | 4790 | --- |
| TOTAL | 631040 | 295500 | 274200 | 208900 | 129200 | 266000 | 706930 | 294740 | 154050 | 293940 | 266310 | 539300 |
| MEAN | 20360 | 9850 | 8845 | 6739 | 4614 | 8581 | 23560 | 9508 | 5135 | 9482 | 8591 | 17980 |
| MAX | 48300 | 16700 | 10000 | 9400 | 6200 | 38400 | 66300 | 15800 | 9860 | 14600 | 16800 | 52400 |
| MIN | 8510 | 7400 | 8000 | 4200 | 3600 | 3200 | 7350 | 5300 | 2990 | 5370 | 4790 | 4280 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CAL YR 1985 | TOTAL | 3738770 | MEAN | 10240 | MAX | 48300 | MIN | 3290 |
| WTR YR 1986 | TOTAL | 4060110 | MEAN | 11120 | MAX | 66300 | MIN | 2990 |

### 05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED
### (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)
### (NATIONAL RADIOCHEMICAL SURVEILLANCE STATION)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1973 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TUR-BIDITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | BARO-METRIC PRES-SURE (MM OF HG) (00025) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | |
| 01... | 1300 | 17200 | -- | 96 | 7.50 | 11.0 | 1.5 | 10.1 | 754 | 93 |
| JAN , 1986 | | | | | | | | | | |
| 06... | 1400 | -- | 7800 | 139 | 7.20 | .0 | 2.4 | 11.6 | 761 | 79 |
| FEB | | | | | | | | | | |
| 25... | 1200 | -- | 4200 | 183 | 7.40 | .0 | 36 | 11.2 | 754 | 77 |
| APR | | | | | | | | | | |
| 03... | 1130 | 64200 | -- | 78 | 7.30 | 5.0 | 14 | 12.3 | 754 | 97 |
| JUN | | | | | | | | | | |
| 24... | 1130 | 9800 | -- | 120 | 8.00 | 21.0 | 4.0 | 8.6 | 761 | 97 |
| AUG | | | | | | | | | | |
| 19... | 1050 | 10100 | -- | 109 | 7.70 | 22.0 | 3.9 | 7.4 | 762 | 85 |

| DATE | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM AD-SORP-TION RATIO (00931) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | |
| 01... | -- | K1600 | 48 | 10 | 12 | 4.4 | 2.5 | 10 | .2 | 1.5 |
| JAN , 1986 | | | | | | | | | | |
| 06... | -- | K22 | 58 | 14 | 15 | 5.1 | 3.1 | 10 | .2 | 1.0 |
| FEB | | | | | | | | | | |
| 25... | K1300 | 75 | 76 | 17 | 19 | 6.9 | 4.3 | 11 | .2 | 1.1 |
| APR | | | | | | | | | | |
| 03... | 290 | 130 | 29 | 7 | 7.4 | 2.5 | 1.9 | 12 | .2 | 1.7 |
| JUN | | | | | | | | | | |
| 24... | 760 | 1100 | 53 | 8 | 13 | 4.9 | 2.9 | 10 | .2 | 1.0 |
| AUG | | | | | | | | | | |
| 19... | 350 | 1000 | 51 | 11 | 13 | 4.5 | 2.7 | 10 | .2 | 1.9 |

| DATE | BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440) | CAR-BONATE IT-FLD (MG/L AS CO3) (99445) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 01... | 47 | -- | 38 | 2.4 | 3.9 | 4.2 | <.10 | 9.1 | 93 |
| JAN , 1986 | | | | | | | | | |
| 06... | 54 | -- | 43 | 5.4 | 12 | 5.1 | <.10 | 13 | 82 |
| FEB | | | | | | | | | |
| 25... | 72 | -- | 58 | 4.6 | 11 | 6.4 | <.10 | 15 | 102 |
| APR | | | | | | | | | |
| 03... | 26 | -- | 21 | 2.1 | 12 | 3.1 | <.10 | 8.2 | 58 |
| JUN | | | | | | | | | |
| 24... | 54 | -- | 44 | .9 | 10 | 4.3 | <.10 | 3.9 | 76 |
| AUG | | | | | | | | | |
| 19... | 49 | -- | 40 | 1.6 | 11 | 4.0 | <.10 | 10 | 88 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 01... | 61 | .13 | 4320 | .30 | <.010 | .50 | .110 | .070 | <.010 |
| JAN , 1986 | | | | | | | | | |
| 06... | 84 | .11 | 1730 | .68 | .080 | .60 | .060 | .030 | .020 |
| FEB | | | | | | | | | |
| 25... | 100 | .14 | 1120 | 1.1 | .120 | .70 | .080 | .040 | .030 |
| APR | | | | | | | | | |
| 03... | 52 | .08 | 10000 | .49 | .110 | .70 | .140 | .040 | .020 |
| JUN | | | | | | | | | |
| 24... | 68 | .10 | 2010 | .37 | .030 | .90 | .100 | .030 | .020 |
| AUG | | | | | | | | | |
| 19... | 73 | .12 | 2400 | .30 | .020 | 1.0 | .110 | .060 | .050 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 01... | 1300 | 17200 | -- | 40 | <1 | 18 | <.5 | 2 | 5 | <3 | 7 |
| FEB , 1986 | | | | | | | | | | | |
| 25... | 1200 | -- | 4200 | 20 | <1 | 19 | <.5 | <1 | <1 | <3 | 1 |
| AUG | | | | | | | | | | | |
| 19... | 1050 | 10100 | -- | 30 | <1 | 20 | <.5 | <1 | 4 | <3 | 9 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 01... | 410 | 2 | 5 | 10 | <.1 | <10 | 8 | <1 | 28 | <6 | 5 |
| FEB , 1986 | | | | | | | | | | | |
| 25... | 350 | <1 | <4 | 56 | <.1 | <10 | 1 | <1 | 39 | <6 | 24 |
| AUG | | | | | | | | | | | |
| 19... | 330 | <5 | <4 | 9 | .1 | <10 | 2 | <1 | 33 | <6 | 3 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030) | GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040) | GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515) | GROSS BETA, DIS-SOLVED (PCI/L AS SR/ YT-90) (80050) | GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060) | RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511) | URANIUM DIS-SOLVED, EXTRAC-TION (UG/L) (80020) |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN , 1986 | | | | | | | | | | |
| 06... | 1400 | -- | 7800 | <.4 | <.6 | 1.8 | 1.6 | <.6 | .03 | .03 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 01... | 1300 | 17200 | -- | 96 | 11.0 | 49 | 2280 | 27 |
| NOV | | | | | | | | |
| 19... | 1315 | 10000 | -- | 120 | 4.5 | -- | -- | -- |
| JAN , 1986 | | | | | | | | |
| 06... | 1400 | -- | 7800 | 139 | .0 | 4 | 84 | 61 |
| FEB | | | | | | | | |
| 25... | 1200 | -- | 4200 | 183 | .0 | 3 | 33 | 65 |
| APR | | | | | | | | |
| 03... | 1130 | 64200 | -- | 78 | 5.0 | 146 | 25300 | 19 |
| MAY | | | | | | | | |
| 06... | 1100 | 9710 | -- | 96 | 16.5 | -- | -- | -- |
| JUN | | | | | | | | |
| 02... | 1150 | 3100 | -- | 168 | 19.0 | -- | -- | -- |
| 24... | 1130 | 9800 | -- | 120 | 21.0 | 36 | 953 | 52 |
| JUL | | | | | | | | |
| 28... | 1650 | 12600 | -- | 125 | 25.5 | -- | -- | -- |
| AUG | | | | | | | | |
| 19... | 1050 | 10100 | -- | 109 | 22.0 | 17 | 464 | 52 |
| SEP | | | | | | | | |
| 26... | 1130 | 34200 | -- | 122 | 17.5 | -- | -- | -- |

## 05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI

**LOCATION.**--Lat 44°52'02", long 92°15'07", in SE 1/4 NW 1/4 sec.31, T.28 N., R.15 W., St. Croix County, Hydrologic Unit 07050005, on right bank 50 ft downstream from Low-Water Bridge on Coulee Road, approximately 550 ft upstream from French Creek and at Spring Valley.

**DRAINAGE AREA.**--47.9 mi$^2$.

**PERIOD OF RECORD.**--November 1981 to September 1983, May to September 1986.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 960 ft, from topographic map.

**REMARKS.**--No estimated daily discharges. Records good below 300 ft$^3$/s and poor above.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 6,000 ft$^3$/s Sept. 21, 1986, gage height, 8.80 ft, from rating curve extended above 140 ft$^3$/s on basis of indirect measurement of peak flow; minimum discharge, 5.1 ft$^3$/s Mar. 7, 1982, gage height, 2.21 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge during period May to September, 6,000 ft$^3$/s Sept. 21, gage height, 8.80 ft, from rating curve extended above 140 ft$^3$/s on basis of indirect measurement of peak flow; minimum discharge, 14 ft$^3$/s June 16-18, 20, 21, July 7-11, Aug. 12, 13, Sept. 5-9, gage height, 1.54 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 1.5 | 13 | 3.1 | 194 |
| 1.8 | 22 | 3.5 | 311 |
| 2.0 | 32 | 4.0 | 510 |
| 2.3 | 56 | 4.5 | 772 |
| 2.7 | 109 | 5.0 | 1,110 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 46 | 17 | 16 | 16 | 16 |
| 2 | | | | | | | | 26 | 16 | 15 | 15 | 16 |
| 3 | | | | | | | | 23 | 16 | 15 | 15 | 19 |
| 4 | | | | | | | | 21 | 16 | 15 | 15 | 18 |
| 5 | | | | | | | | 21 | 16 | 16 | 15 | 15 |
| 6 | | | | | | | | 20 | 16 | 17 | 15 | 14 |
| 7 | | | | | | | | 19 | 16 | 15 | 16 | 14 |
| 8 | | | | | | | | 19 | 16 | 15 | 33 | 14 |
| 9 | | | | | | | | 19 | 16 | 15 | 27 | 15 |
| 10 | | | | | | | | 20 | 16 | 14 | 17 | 257 |
| 11 | | | | | | | | 23 | 17 | 19 | 15 | 439 |
| 12 | | | | | | | | 31 | 16 | 23 | 15 | 61 |
| 13 | | | | | | | | 138 | 15 | 45 | 15 | 26 |
| 14 | | | | | | | | 133 | 15 | 28 | 19 | 27 |
| 15 | | | | | | | | 35 | 15 | 54 | 243 | 201 |
| 16 | | | | | | | | 23 | 15 | 47 | 39 | 80 |
| 17 | | | | | | | | 20 | 14 | 20 | 48 | 34 |
| 18 | | | | | | | | 19 | 15 | 17 | 24 | 31 |
| 19 | | | | | | | | 18 | 15 | 92 | 18 | 58 |
| 20 | | | | | | | | 18 | 15 | 48 | 17 | 82 |
| 21 | | | | | | | | 18 | 18 | 21 | 16 | 846 |
| 22 | | | | | | | | 18 | 130 | 18 | 15 | 744 |
| 23 | | | | | | | | 18 | 58 | 17 | 15 | 146 |
| 24 | | | | | | | | 18 | 21 | 17 | 16 | 56 |
| 25 | | | | | | | | 18 | 17 | 18 | 16 | 275 |
| 26 | | | | | | | | 18 | 18 | 20 | 16 | 84 |
| 27 | | | | | | | | 17 | 18 | 21 | 15 | 47 |
| 28 | | | | | | | | 17 | 17 | 45 | 15 | 36 |
| 29 | | | | | | | | 17 | 16 | 21 | 15 | 163 |
| 30 | | | | | | | | 17 | 16 | 17 | 16 | 50 |
| 31 | | | | | | | | 17 | --- | 17 | 16 | --- |
| TOTAL | | | | | | | | 885 | 642 | 778 | 808 | 3884 |
| MEAN | | | | | | | | 28.5 | 21.4 | 25.1 | 26.1 | 129 |
| MAX | | | | | | | | 138 | 130 | 92 | 243 | 846 |
| MIN | | | | | | | | 17 | 14 | 14 | 15 | 14 |
| CFSM | | | | | | | | .60 | .45 | .52 | .55 | 2.69 |
| IN. | | | | | | | | .69 | .50 | .60 | .63 | 3.02 |

## 05370000 EAU GALLE RIVER AT SPRING VALLEY, WI

LOCATION.--Lat 44°51'10", long 92°14'17", in SE 1/4 NE 1/4 sec.6, T.27 N., R.15 W., Pierce County, Hydrologic Unit 07050005, on right bank 770 ft downstream from flood control dam, 1,500 ft upstream from Mines Creek, at Spring Valley.

DRAINAGE AREA.--64.1 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WDR WI-67-1: 1966. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and v-notch sharp-crested weir. Datum of gage is 900.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft downstream at datum of 912.45 ft above National Geodetic Vertical Datum of 1929. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft above National Geodetic Vertical Datum of 1929. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharge: Jan. 15. Records good. Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft upstream.

AVERAGE DISCHARGE.--18 years (1969-86), 34.5 ft$^3$/s, since operation of flood-control reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft$^3$/s Apr. 15, 1954, gage height, 12.50 ft, datum then in use; no flow Aug. 11-15, 1971, flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing; minimum observed prior to dam construction period, 5.8 ft$^3$/s Sept. 25, 27, 28, 30, 1949.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since at least 1894, that of Sept. 18, 1942, 19.98 ft, with datum at 909.45 ft above National Geodetic Vertical Datum of 1929, from floodmarks, discharge, 33,000 ft$^3$/s estimated by U.S. Army Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft$^3$/s at Elmwood, drainage area, 91.9 mi$^2$.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft$^3$/s Sept. 21, gage height, 18.90 ft; minimum discharge, 3.4 ft$^3$/s Oct. 3, gage height, 12.63 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 13.5 | 14 | 14.8 | 183 |
| 13.8 | 23 | 15.3 | 373 |
| 14.1 | 44 | 16.0 | 660 |
| 14.4 | 90 | 18.0 | 1,750 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 47 | 20 | 20 | 16 | 16 | 15 | 134 | 73 | 27 | 24 | 23 | 19 |
| 2 | 51 | 21 | 20 | 16 | 16 | 15 | 94 | 54 | 37 | 23 | 22 | 19 |
| 3 | 32 | 20 | 19 | 16 | 16 | 15 | 62 | 46 | 34 | 23 | 21 | 23 |
| 4 | 124 | 20 | 18 | 16 | 15 | 15 | 80 | 41 | 28 | 27 | 21 | 28 |
| 5 | 449 | 19 | 18 | 16 | 15 | 15 | 165 | 38 | 26 | 27 | 21 | 23 |
| 6 | 106 | 19 | 18 | 16 | 15 | 14 | 140 | 33 | 24 | 34 | 21 | 21 |
| 7 | 98 | 19 | 18 | 15 | 15 | 14 | 73 | 28 | 24 | 27 | 22 | 19 |
| 8 | 65 | 18 | 18 | 16 | 15 | 15 | 49 | 27 | 23 | 23 | 28 | 19 |
| 9 | 18 | 18 | 18 | 16 | 15 | 15 | 42 | 27 | 23 | 23 | 37 | 20 |
| 10 | 31 | 18 | 17 | 16 | 15 | 15 | 38 | 27 | 22 | 22 | 29 | 102 |
| 11 | 29 | 18 | 17 | 15 | 15 | 15 | 36 | 28 | 26 | 29 | 22 | 421 |
| 12 | 29 | 18 | 17 | 15 | 14 | 15 | 34 | 34 | 25 | 37 | 20 | 119 |
| 13 | 49 | 18 | 17 | 15 | 14 | 16 | 33 | 58 | 24 | 43 | 20 | 53 |
| 14 | 43 | 18 | 17 | 15 | 15 | 17 | 39 | 173 | 23 | 45 | 26 | 39 |
| 15 | 33 | 18 | 16 | 15 | 15 | 16 | 134 | 78 | 23 | 40 | 144 | 110 |
| 16 | 28 | 19 | 17 | 15 | 16 | 16 | 84 | 46 | 23 | 64 | 72 | 129 |
| 17 | 25 | 19 | 17 | 15 | 15 | 17 | 54 | 34 | 22 | 39 | 53 | 74 |
| 18 | 24 | 20 | 17 | 15 | 15 | 29 | 43 | 30 | 23 | 30 | 38 | 74 |
| 19 | 23 | 21 | 16 | 15 | 15 | 149 | 36 | 30 | 23 | 50 | 30 | 65 |
| 20 | 22 | 23 | 16 | 15 | 15 | 154 | 33 | 29 | 22 | 73 | 25 | 82 |
| 21 | 21 | 23 | 16 | 15 | 15 | 115 | 33 | 28 | 78 | 39 | 23 | 1050 |
| 22 | 21 | 21 | 16 | 16 | 15 | 92 | 33 | 28 | 71 | 29 | 22 | 881 |
| 23 | 21 | 21 | 17 | 15 | 15 | 146 | 31 | 26 | 99 | 24 | 21 | 304 |
| 24 | 21 | 19 | 17 | 16 | 15 | 221 | 29 | 26 | 42 | 23 | 21 | 142 |
| 25 | 21 | 19 | 17 | 16 | 15 | 437 | 28 | 26 | 28 | 27 | 22 | 220 |
| 26 | 20 | 19 | 17 | 15 | 15 | 755 | 28 | 25 | 26 | 27 | 22 | 173 |
| 27 | 20 | 19 | 17 | 15 | 15 | 187 | 28 | 20 | 30 | 31 | 21 | 84 |
| 28 | 19 | 18 | 16 | 15 | 14 | 337 | 298 | 17 | 26 | 41 | 20 | 58 |
| 29 | 19 | 18 | 16 | 16 | --- | 372 | 266 | 33 | 24 | 41 | 19 | 110 |
| 30 | 19 | 18 | 16 | 15 | --- | 176 | 109 | 54 | 25 | 33 | 19 | 98 |
| 31 | 19 | --- | 16 | 15 | --- | 93 | --- | 34 | --- | 26 | 19 | --- |
| TOTAL | 1547 | 579 | 532 | 478 | 421 | 3523 | 2286 | 1251 | 901 | 1044 | 924 | 4579 |
| MEAN | 49.9 | 19.3 | 17.2 | 15.4 | 15.0 | 114 | 76.2 | 40.4 | 30.0 | 33.7 | 29.8 | 153 |
| MAX | 449 | 23 | 20 | 16 | 16 | 755 | 298 | 173 | 99 | 73 | 144 | 1050 |
| MIN | 18 | 18 | 16 | 15 | 14 | 14 | 28 | 17 | 22 | 22 | 19 | 19 |

CAL YR 1985 TOTAL 11461.6 MEAN 31.4 MAX 449 MIN 7.0
WTR YR 1986 TOTAL 18065.0 MEAN 49.5 MAX 1050 MIN 14

## 05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to current year.
WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 20, 1978.

REMARKS.--The water-quality monitor was moved upstream to 100 ft downstream from dam on July 2, 1986. Prior to July 2, 1986, poor water circulation due to aquatic macrophytes, and ground-water seepage from the streambed, caused local water temperature and specific conductance differences. Records from Jan. 16 to June 30 were not published because of major differences between recorded values and field measurements. Unpublished records of hourly specific conductance and water temperature are available in files of District Office. Records for Oct. 1 to July 2 were poor and from July 3 to Sept. 30 were good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 837 microsiemens Oct. 27, 1985; minimum, 138 microsiemens Sept. 22, 1986, but may have been lower during period Jan. 16 to June 30, 1986, when there were major differences between recorded values and field measurements.
WATER TEMPERATURES: Maximum, 27.5°C Aug. 11, 1982; minimum, 0.0°C Mar. 30, 31, 1982, and many days during February and March 1984, and Nov. 20, 21, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 837 microsiemens Oct. 27; minimum, 138 microsiemens Sept. 22 (see note under EXTREMES FOR PERIOD OF DAILY RECORD).
WATER TEMPERATURES: Maximum, 27.0°C May 31 and June 22; minimum, 0.0°C Nov. 20, 21.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 11.0 | 9.5 | 10.5 | 9.0 | 7.5 | 8.0 | 4.0 | .5 | 2.0 | --- | --- | --- |
| 2 | 13.5 | 9.5 | 10.5 | 8.0 | 7.0 | 7.5 | 5.0 | 1.0 | 2.5 | --- | --- | --- |
| 3 | 14.0 | 9.5 | 10.5 | 8.5 | 6.5 | 7.0 | 1.5 | .5 | 1.0 | --- | --- | --- |
| 4 | 10.5 | 9.5 | 10.0 | 8.5 | 6.0 | 7.0 | 3.0 | 1.0 | 1.5 | --- | --- | --- |
| 5 | 9.5 | 9.0 | 9.0 | 7.5 | 6.0 | 6.5 | 4.5 | .5 | 2.5 | --- | --- | --- |
| 6 | 9.5 | 8.5 | 9.0 | 7.0 | 5.5 | 6.0 | 1.0 | .5 | 1.0 | --- | --- | --- |
| 7 | 9.0 | 8.5 | 8.5 | 7.5 | 5.5 | 6.0 | 1.5 | 1.0 | 1.0 | --- | --- | --- |
| 8 | 10.0 | 8.0 | 9.0 | 5.5 | 5.0 | 5.0 | 3.5 | 1.0 | 2.5 | --- | --- | --- |
| 9 | 8.5 | 8.0 | 8.0 | 5.5 | 3.5 | 5.0 | 4.5 | 1.0 | 3.0 | --- | --- | --- |
| 10 | 9.0 | 7.5 | 8.5 | 5.5 | 3.0 | 4.0 | 4.0 | 1.0 | 3.0 | --- | --- | --- |
| 11 | 9.0 | 7.5 | 8.0 | 4.0 | 3.0 | 3.5 | 1.5 | 1.0 | 1.0 | --- | --- | --- |
| 12 | 9.0 | 8.0 | 8.5 | 4.0 | 3.0 | 3.5 | 1.5 | 1.0 | 1.0 | --- | --- | --- |
| 13 | 9.5 | 8.5 | 9.0 | 3.5 | 3.0 | 3.0 | 1.5 | 1.0 | 1.0 | --- | --- | --- |
| 14 | 10.0 | 8.5 | 9.0 | 3.5 | 2.5 | 3.0 | 2.0 | 1.0 | 1.5 | --- | --- | --- |
| 15 | 8.5 | 8.0 | 8.0 | 4.0 | 3.0 | 3.0 | 1.5 | 1.0 | 1.0 | --- | --- | --- |
| 16 | 9.0 | 7.5 | 8.0 | 3.5 | 2.5 | 3.0 | 1.0 | 1.0 | 1.0 | | | |
| 17 | 8.5 | 7.5 | 8.0 | 3.0 | 2.0 | 2.5 | 1.5 | 1.0 | 1.5 | | | |
| 18 | 9.0 | 8.0 | 8.5 | 3.0 | 2.5 | 3.0 | 1.5 | 1.5 | 1.5 | | | |
| 19 | 9.0 | 8.0 | 8.5 | 3.0 | 1.0 | 2.0 | --- | --- | --- | | | |
| 20 | 9.0 | 7.5 | 8.0 | 1.5 | .0 | .5 | --- | --- | --- | | | |
| 21 | 9.0 | 8.0 | 8.5 | .5 | .0 | .5 | --- | --- | --- | | | |
| 22 | 9.0 | 8.5 | 8.5 | 3.5 | .5 | 1.0 | --- | --- | --- | | | |
| 23 | 10.5 | 8.5 | 9.5 | 2.0 | .5 | .5 | --- | --- | --- | | | |
| 24 | 10.5 | 9.0 | 9.5 | 1.5 | .5 | .5 | --- | --- | --- | | | |
| 25 | 10.0 | 8.5 | 9.0 | 1.5 | .5 | 1.0 | --- | --- | --- | | | |
| 26 | 11.0 | 9.0 | 10.0 | 5.0 | 1.5 | 3.5 | --- | --- | --- | | | |
| 27 | 10.5 | 8.5 | 9.5 | 3.5 | .5 | 1.5 | --- | --- | --- | | | |
| 28 | 10.0 | 8.5 | 9.0 | 2.5 | .5 | 1.5 | --- | --- | --- | | | |
| 29 | 10.0 | 8.0 | 9.0 | 3.0 | 1.0 | 2.0 | --- | --- | --- | | | |
| 30 | 9.0 | 8.0 | 8.5 | 2.5 | 1.0 | 2.0 | --- | --- | --- | | | |
| 31 | 9.0 | 7.5 | 8.0 | --- | --- | --- | --- | --- | --- | | | |
| MONTH | 14.0 | 7.5 | 9.0 | 9.0 | .0 | 3.5 | 5.0 | .5 | 1.5 | | | |

### 05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
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| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| MONTH | | | | | | | | | | | | |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | | | | 22.0 | 20.5 | 21.5 | 23.0 | 21.5 | 22.0 | 20.0 | 17.5 | 18.5 |
| 2 | | | | 21.5 | 20.0 | 20.5 | 21.5 | 21.0 | 21.0 | 19.0 | 18.0 | 18.5 |
| 3 | | | | 21.0 | 19.5 | 20.0 | 22.0 | 20.5 | 21.0 | 20.0 | 18.0 | 19.0 |
| 4 | | | | 22.5 | 20.0 | 21.0 | 22.0 | 20.5 | 21.0 | 19.5 | 18.5 | 19.0 |
| 5 | | | | 23.0 | 20.5 | 21.5 | 23.0 | 20.5 | 21.5 | 18.5 | 17.5 | 18.0 |
| 6 | | | | 24.0 | 22.0 | 23.0 | 22.5 | 20.5 | 21.5 | 18.0 | 17.0 | 17.5 |
| 7 | | | | 24.0 | 21.5 | 22.5 | 21.5 | 21.0 | 21.5 | 17.5 | 17.0 | 17.0 |
| 8 | | | | 22.5 | 21.5 | 22.0 | 23.5 | 20.5 | 22.0 | 17.0 | 16.5 | 17.0 |
| 9 | | | | 23.0 | 21.0 | 22.0 | 24.0 | 21.5 | 22.5 | 17.0 | 16.5 | 16.5 |
| 10 | | | | 22.0 | 21.0 | 21.5 | 22.0 | 21.0 | 21.5 | 17.0 | 16.5 | 16.5 |
| 11 | | | | 22.5 | 20.5 | 21.5 | 21.5 | 20.0 | 20.5 | 17.0 | 15.0 | 16.0 |
| 12 | | | | 22.0 | 21.0 | 21.5 | 20.0 | 19.5 | 20.0 | 16.0 | 14.5 | 15.5 |
| 13 | | | | 21.5 | 21.0 | 21.5 | 19.5 | 19.0 | 19.5 | 16.0 | 15.0 | 15.0 |
| 14 | | | | 21.5 | 20.5 | 21.0 | 20.5 | 19.0 | 20.0 | 15.5 | 14.0 | 14.5 |
| 15 | | | | 22.5 | 21.0 | 21.5 | 22.0 | 20.0 | 21.0 | 14.0 | 14.0 | 14.0 |
| 16 | | | | 23.5 | 21.0 | 22.5 | 24.0 | 20.0 | 22.0 | 14.0 | 12.5 | 13.5 |
| 17 | | | | 25.5 | 22.5 | 23.5 | 25.5 | 22.5 | 23.5 | 13.5 | 12.5 | 13.0 |
| 18 | | | | 26.5 | 23.5 | 24.5 | 22.5 | 21.0 | 22.0 | 13.5 | 13.0 | 13.0 |
| 19 | | | | 26.5 | 23.0 | 25.0 | 22.0 | 20.5 | 21.0 | 13.0 | 13.0 | 13.0 |
| 20 | | | | 25.5 | 24.0 | 25.0 | 21.0 | 20.0 | 20.5 | 13.5 | 13.0 | 13.0 |
| 21 | | | | 25.5 | 23.5 | 24.5 | 20.0 | 19.0 | 19.5 | 14.5 | 13.0 | 13.5 |
| 22 | | | | 25.0 | 22.5 | 23.5 | 20.0 | 18.5 | 19.0 | 15.5 | 14.5 | 15.0 |
| 23 | | | | 23.5 | 21.5 | 22.5 | 20.0 | 18.0 | 19.0 | 16.0 | 15.0 | 15.0 |
| 24 | | | | 23.5 | 22.0 | 22.5 | 18.5 | 18.0 | 18.0 | 15.0 | 14.5 | 15.0 |
| 25 | | | | 25.0 | 22.5 | 23.5 | 21.5 | 18.0 | 19.0 | 16.5 | --- | --- |
| 26 | | | | 23.5 | 22.5 | 23.0 | 20.0 | 18.5 | 19.0 | 17.0 | 16.0 | 16.5 |
| 27 | | | | 24.0 | 22.5 | 23.0 | 18.5 | 17.5 | 18.0 | 16.5 | 15.5 | 16.0 |
| 28 | | | | 26.0 | 23.0 | 24.0 | 19.5 | 17.0 | 18.0 | 15.5 | 14.5 | 15.0 |
| 29 | | | | 25.0 | 23.0 | 24.0 | 18.0 | 17.0 | 17.5 | 17.5 | 15.0 | 16.5 |
| 30 | | | | 25.0 | 21.5 | 23.5 | 17.5 | 17.0 | 17.0 | 16.5 | 15.0 | 16.0 |
| 31 | | | | 23.5 | 22.5 | 23.0 | 18.5 | 17.0 | 17.5 | --- | --- | --- |
| MONTH | | | | 26.5 | 19.5 | 22.5 | 25.5 | 17.0 | 20.0 | 20.0 | 12.5 | 15.5 |
| YEAR | 27.0 | .0 | 12.0 | | | | | | | | | |

## 05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

### SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 387 | 285 | 380 | 557 | 359 | 386 | 583 | 420 | 483 | --- | --- | --- |
| 2 | 585 | 379 | 405 | 372 | 358 | 361 | 661 | 462 | 537 | --- | --- | --- |
| 3 | 532 | 382 | 407 | 729 | 358 | 433 | 500 | 439 | 474 | --- | --- | --- |
| 4 | 597 | 318 | 410 | 719 | 354 | 411 | 536 | 428 | 474 | --- | --- | --- |
| 5 | 313 | 267 | 287 | 456 | 360 | 384 | 588 | 372 | 492 | --- | --- | --- |
| 6 | 309 | 281 | 299 | 514 | 359 | 378 | 466 | 393 | 424 | --- | --- | --- |
| 7 | 288 | 268 | 277 | 532 | 358 | 386 | 529 | 391 | 431 | --- | --- | --- |
| 8 | 728 | 267 | 472 | 514 | 360 | 395 | 638 | 426 | 583 | --- | --- | --- |
| 9 | 519 | 292 | 334 | 542 | 399 | 493 | 616 | 537 | 580 | --- | --- | --- |
| 10 | 334 | 289 | 297 | 523 | 362 | 453 | 612 | 443 | 567 | --- | --- | --- |
| 11 | 315 | 291 | 301 | 485 | 363 | 433 | 575 | 407 | 463 | --- | --- | --- |
| 12 | 318 | 299 | 306 | 493 | 362 | 413 | 528 | 409 | 450 | --- | --- | --- |
| 13 | 304 | 299 | 301 | 514 | 362 | 434 | 523 | 440 | 486 | --- | --- | --- |
| 14 | 307 | 300 | 303 | 567 | 435 | 497 | 592 | 426 | 519 | --- | --- | --- |
| 15 | 313 | 302 | 307 | 588 | 410 | 507 | 540 | 417 | 465 | --- | --- | --- |
| 16 | 335 | 308 | 318 | 514 | 450 | 485 | 508 | 409 | 435 | | | |
| 17 | 351 | 315 | 332 | 574 | 380 | 470 | 604 | 446 | 512 | | | |
| 18 | 491 | 325 | 347 | 555 | 398 | 470 | 555 | 555 | 555 | | | |
| 19 | 495 | 325 | 351 | 459 | 390 | 425 | --- | --- | --- | | | |
| 20 | 442 | 330 | 351 | 435 | 425 | 430 | --- | --- | --- | | | |
| 21 | 422 | 332 | 354 | 442 | 429 | 435 | --- | --- | --- | | | |
| 22 | 403 | 344 | 362 | 576 | 365 | 440 | --- | --- | --- | | | |
| 23 | 537 | 342 | 380 | 533 | 349 | 420 | --- | --- | --- | | | |
| 24 | 352 | 338 | 342 | 433 | 348 | 382 | --- | --- | --- | | | |
| 25 | 473 | 339 | 358 | 435 | 347 | 390 | --- | --- | --- | | | |
| 26 | 788 | 346 | 445 | 667 | 430 | 557 | --- | --- | --- | | | |
| 27 | 837 | 347 | 445 | 607 | 426 | 478 | --- | --- | --- | | | |
| 28 | 636 | 352 | 381 | 478 | 375 | 446 | --- | --- | --- | | | |
| 29 | 811 | 351 | 475 | 584 | 376 | 476 | --- | --- | --- | | | |
| 30 | 627 | 350 | 415 | 557 | 376 | 459 | --- | --- | --- | | | |
| 31 | 596 | 354 | 416 | --- | --- | --- | --- | --- | --- | | | |
| MONTH | 837 | 267 | 360 | 729 | 347 | 438 | 661 | 372 | 496 | | | |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
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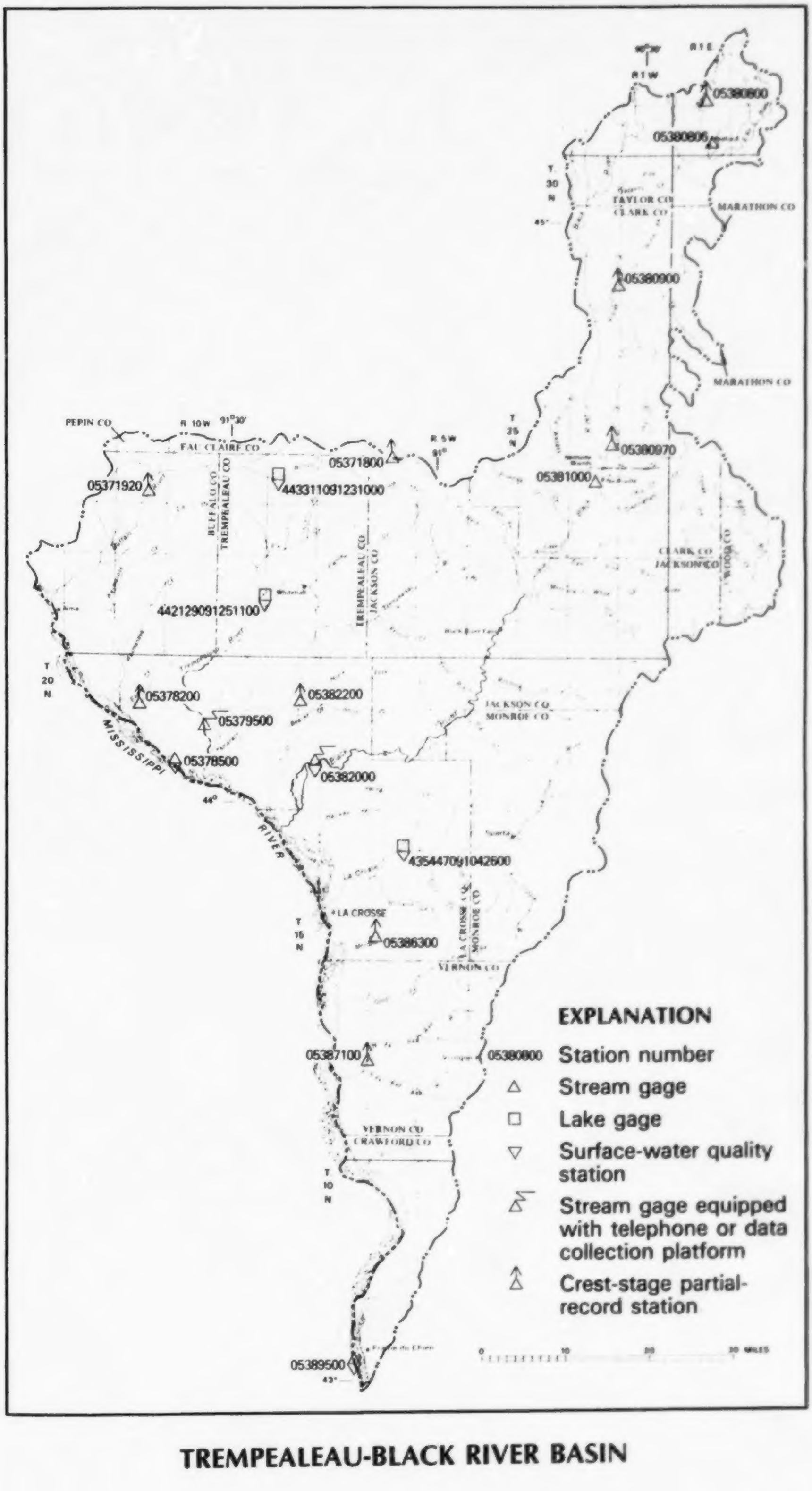
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| MONTH | | | | | | | | | | | | |

## 05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

### SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | | | | 306 | 249 | 281 | 300 | 289 | 293 | 328 | 320 | 325 |
| 2 | | | | 329 | 242 | 298 | 302 | 296 | 299 | 326 | 315 | 320 |
| 3 | | | | 339 | 330 | 334 | 305 | 288 | 297 | 324 | 289 | 306 |
| 4 | | | | 334 | 319 | 325 | 304 | 294 | 299 | 312 | 293 | 302 |
| 5 | | | | 334 | 306 | 323 | 297 | 288 | 293 | 320 | 305 | 316 |
| 6 | | | | 309 | 295 | 303 | 292 | 276 | 284 | 328 | 315 | 321 |
| 7 | | | | 321 | 302 | 309 | 289 | 271 | 282 | 332 | 316 | 327 |
| 8 | | | | 317 | 306 | 311 | 287 | 275 | 281 | 338 | 326 | 332 |
| 9 | | | | 310 | 302 | 306 | 288 | 274 | 281 | 340 | 325 | 333 |
| 10 | | | | 331 | 304 | 315 | 299 | 286 | 290 | 332 | 296 | 318 |
| 11 | | | | 332 | 294 | 314 | 309 | 299 | 305 | 321 | 242 | 275 |
| 12 | | | | 307 | 294 | 303 | 319 | 310 | 313 | 258 | 242 | 251 |
| 13 | | | | 308 | 297 | 301 | 323 | 309 | 314 | 251 | 246 | 248 |
| 14 | | | | 319 | 307 | 310 | 315 | 297 | 306 | 251 | 247 | 249 |
| 15 | | | | 315 | 298 | 308 | 305 | 226 | 287 | 253 | 245 | 249 |
| 16 | | | | 322 | 292 | 300 | 292 | 269 | 279 | 260 | 246 | 254 |
| 17 | | | | 302 | 294 | 296 | 271 | 259 | 266 | 249 | 245 | 248 |
| 18 | | | | 297 | 288 | 294 | 279 | 265 | 274 | 254 | 246 | 251 |
| 19 | | | | 304 | 243 | 275 | 290 | 272 | 281 | 262 | 251 | 257 |
| 20 | | | | 270 | 243 | 259 | 289 | 281 | 285 | 266 | 256 | 261 |
| 21 | | | | 284 | 272 | 277 | 295 | 286 | 291 | 268 | 151 | 223 |
| 22 | | | | 294 | 282 | 287 | 301 | 286 | 294 | 158 | 138 | 152 |
| 23 | | | | 320 | 284 | 301 | 305 | 287 | 300 | 166 | 151 | 158 |
| 24 | | | | 310 | 295 | 304 | 311 | 294 | 305 | 185 | 158 | 171 |
| 25 | | | | 303 | 284 | 292 | 304 | 295 | 300 | 398 | 159 | 201 |
| 26 | | | | 306 | 286 | 293 | 305 | 296 | 300 | 204 | 160 | 194 |
| 27 | | | | 315 | 291 | 300 | 313 | 302 | 309 | 226 | 209 | 218 |
| 28 | | | | 291 | 267 | 278 | 321 | 308 | 317 | 261 | 227 | 247 |
| 29 | | | | 384 | 262 | 269 | 325 | 314 | 321 | 268 | 220 | 243 |
| 30 | | | | 314 | 264 | 281 | 323 | 306 | 319 | 261 | 238 | 252 |
| 31 | | | | 287 | 277 | 281 | 328 | 307 | 319 | --- | --- | --- |
| MONTH | | | | 384 | 242 | 298 | 328 | 226 | 296 | 398 | 138 | 260 |
| YEAR | 837 | 93 | 311 | | | | | | | | | |



TREMPEALEAU-BLACK RIVER BASIN

BEST COPY AVAILABLE

## 443311091231000 CRYSTAL LAKE AT STRUM, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 44°33'11", long 91°23'10", in SW 1/4 sec.17, T.24 N., R.8 W., Trempealeau County, Hydrologic Unit 07040003, at Strum.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by LaVerne Anderson. Elevation of gage is 870.56 ft, revised, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 15.3 ft, Aug. 15, 1986; minimum observed, 13.3 ft, June 14, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 15.3 ft, Aug. 15; minimum observed, 13.3 ft, June 14.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 7 | 14.5 | APR. 28 | 14.7 | MAY 19 | 14.6 | JUNE 14 | 13.3 | JULY 16 | 14.6 | AUG. 30 | 14.4 |
| APR. 14 | 13.7 | MAY 5 | 13.7 | MAY 30 | 13.5 | JUNE 21 | 14.1 | JULY 31 | 14.6 | SEPT. 14 | 14.6 |
| APR. 21 | 13.5 | MAY 12 | 13.5 | JUNE 7 | 13.4 | JUNE 28 | 15.2 | AUG. 15 | 15.3 | | |

### WATER-QUALITY RECORDS

LOCATION.--Lat 44°33'16", long 91°23'09", in SW 1/4 sec.17, T.24 N., R.8 W., Trempealeau County, Hydrologic Unit 07040003, near center of lake, at Strum.

PERIOD OF RECORD.--April 1985 to current year.

REMARKS.--Secchi disc readings made by LaVerne Anderson.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 7 | 1.1 | APR. 28 | 0.9 | MAY 19 | 0.9 | JUNE 13 | 0.9 | JULY 16 | 0.6 | AUG. 30 | 1.1 |
| APR. 14 | 1.2 | MAY 5 | 1.1 | MAY 30 | 1.2 | JUNE 21 | 0.8 | JULY 31 | 1.1 | SEPT. 14 | 0.7 |
| APR. 21 | 1.2 | MAY 12 | 1.2 | JUNE 7 | 1.1 | JUNE 27 | 0.6 | AUG. 15 | 0.6 | | |

## 05378500 MISSISSIPPI RIVER AT WINONA, MN

**LOCATION**.--Lat $44^\circ03'21''$, long $91^\circ38'16''$, in sec.23, T.107 N., R.7 W., Winona County, Hydrologic Unit 07040003, on right bank at Winona pumping station, 9.5 mi upstream from Trempealeau River, and at mile 725.7 upstream from the Ohio River.

**DRAINAGE AREA**.--59,200 $mi^2$, approximately.

### WATER-DISCHARGE RECORDS

**PERIOD OF RECORD**.--June 1928 to current year. Gage-height records collected in this vicinity since 1878 are contained in reports of Mississippi River Commission.

**GAGE**.--Water-stage recorder. Datum of gage is 639.64 ft above National Geodetic Vertical Datum of 1929. June 10, 1928, to Apr. 15, 1931, nonrecording gage at site 800 ft upstream. Prior to Oct. 1, 1929, at datum 0.20 ft higher and Oct. 1, 1929, to Apr. 15, 1931, at datum 0.12 ft lower. Apr. 16, 1931, to Nov. 12, 1934, nonrecording gage at present site and datum. Since Mar. 31, 1937, auxiliary water-stage recorder 2.7 mi upstream at tailwater of navigation dam 5A.

**REMARKS**.--No estimated daily discharges. Records good. Some regulation by reservoirs, navigation dam, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

**AVERAGE DISCHARGE**.--58 years, 27,980 $ft^3/s$, 6.42 in/yr.

**EXTREMES FOR PERIOD OF RECORD**.--Maximum discharge, 268,000 $ft^3/s$ Apr. 19, 1965, gage height, 20.77 ft, from floodmark; minimum, 1,940 $ft^3/s$ Dec. 12, 1980, gage height, 3.96 ft, result of ice jam; minimum gage height, -3.38 ft Aug. 31, 1934 (prior to dam construction in 1936); minimum gage height since 1938, after completion of dam, 1.95 ft, Jan. 27, 1944.

**EXTREMES OUTSIDE PERIOD OF RECORD**.--Flood of June 18, 1880, reached an elevation of 657.14 ft, discharge, 172,000 $ft^3/s$, from information by Corps of Engineers.

**EXTREMES FOR CURRENT YEAR**.--Maximum discharge, 167,000 $ft^3/s$ Apr. 7, gage height, 16.60 ft; minimum daily discharge, 15,000 $ft^3/s$ Nov. 30; minimum gage height, 5.16 ft Nov. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 57100 | 50000 | 22300 | 28700 | 22600 | 19800 | 97800 | 100000 | 71800 | 66700 | 57500 | 42000 |
| 2 | 54200 | 47800 | 26800 | 28500 | 22700 | 19800 | 111000 | 107000 | 66400 | 66500 | 57600 | 38800 |
| 3 | 56800 | 44100 | 25800 | 28500 | 23900 | 19900 | 126000 | 115000 | 62500 | 65700 | 55600 | 37900 |
| 4 | 62300 | 44100 | 24300 | 28400 | 24000 | 20300 | 139000 | 120000 | 60800 | 62900 | 51400 | 38000 |
| 5 | 65200 | 45800 | 23200 | 28400 | 24100 | 20900 | 153000 | 122000 | 60700 | 61000 | 49000 | 38900 |
| 6 | 66400 | 47200 | 23100 | 28300 | 24100 | 21000 | 163000 | 124000 | 57600 | 60700 | 48800 | 38800 |
| 7 | 69100 | 48200 | 26400 | 27500 | 24100 | 20200 | 166000 | 124000 | 54300 | 61300 | 48200 | 39900 |
| 8 | 75700 | 47000 | 28500 | 25700 | 24400 | 18900 | 165000 | 123000 | 52500 | 59700 | 48300 | 40600 |
| 9 | 84700 | 46000 | 30100 | 23700 | 24400 | 20000 | 161000 | 121000 | 49200 | 55800 | 47600 | 40900 |
| 10 | 91100 | 43800 | 31700 | 23600 | 24200 | 20200 | 155000 | 118000 | 45900 | 51400 | 48000 | 43300 |
| 11 | 92100 | 41300 | 31600 | 25200 | 22700 | 22500 | 148000 | 116000 | 47000 | 49100 | 48200 | 48400 |
| 12 | 89900 | 38900 | 32200 | 25800 | 21000 | 22500 | 142000 | 114000 | 48000 | 48600 | 48400 | 50800 |
| 13 | 85200 | 38100 | 32100 | 25900 | 19600 | 24500 | 137000 | 114000 | 48600 | 48000 | 48300 | 54000 |
| 14 | 81000 | 37800 | 31500 | 26000 | 18200 | 26500 | 132000 | 115000 | 48900 | 47200 | 48600 | 56800 |
| 15 | 78700 | 36600 | 29400 | 26100 | 18400 | 27800 | 128000 | 117000 | 48200 | 47400 | 49000 | 57700 |
| 16 | 76800 | 35500 | 27900 | 25800 | 18600 | 28300 | 125000 | 122000 | 47100 | 49000 | 49400 | 57200 |
| 17 | 75400 | 34900 | 28600 | 25500 | 19800 | 28100 | 121000 | 126000 | 47200 | 50200 | 50400 | 55700 |
| 18 | 74000 | 34400 | 28300 | 25000 | 20100 | 28500 | 116000 | 128000 | 48000 | 51000 | 53300 | 55600 |
| 19 | 72500 | 34500 | 28300 | 25200 | 20300 | 33100 | 112000 | 129000 | 48400 | 53000 | 54000 | 57700 |
| 20 | 71300 | 35000 | 28300 | 25200 | 20800 | 38800 | 111000 | 128000 | 47800 | 54500 | 52700 | 59500 |
| 21 | 68500 | 34800 | 28200 | 27300 | 20900 | 41000 | 109000 | 124000 | 47800 | 56800 | 50600 | 63900 |
| 22 | 65400 | 34300 | 28300 | 24700 | 21100 | 45700 | 106000 | 119000 | 50000 | 58100 | 47000 | 75000 |
| 23 | 63200 | 35300 | 28400 | 24600 | 21100 | 47200 | 102000 | 113000 | 52100 | 57500 | 44100 | 88400 |
| 24 | 61200 | 32200 | 29400 | 24600 | 21100 | 51800 | 99600 | 107000 | 54500 | 55700 | 43000 | 105000 |
| 25 | 61200 | 24500 | 28500 | 23900 | 20700 | 60200 | 98200 | 102000 | 58800 | 55600 | 42700 | 120000 |
| 26 | 57200 | 18600 | 26900 | 23900 | 20600 | 63500 | 96400 | 95800 | 61400 | 55100 | 44500 | 133000 |
| 27 | 55700 | 19700 | 26800 | 23500 | 20700 | 66300 | 94500 | 89700 | 63100 | 55500 | 46200 | 138000 |
| 28 | 53500 | 20800 | 27600 | 20100 | 20300 | 68800 | 92600 | 84600 | 64000 | 56300 | 47200 | 138000 |
| 29 | 49500 | 18000 | 28600 | 18800 | --- | 78100 | 91800 | 82100 | 66000 | 56100 | 45700 | 136000 |
| 30 | 47500 | 15000 | 28700 | 19700 | --- | 83500 | 94400 | 79300 | 67600 | 56400 | 43600 | 135000 |
| 31 | 49400 | --- | 28700 | 21000 | --- | 89600 | --- | 76000 | --- | 56600 | 43400 | --- |
| TOTAL | 2111800 | 1084200 | 870500 | 779100 | 604500 | 1177300 | 3693300 | 3455500 | 1646200 | 1729400 | 1512300 | 2084800 |
| MEAN | 68120 | 36140 | 28080 | 25130 | 21590 | 37980 | 123100 | 111500 | 54870 | 55790 | 48780 | 69490 |
| MAX | 92100 | 50000 | 32200 | 28700 | 24400 | 89600 | 166000 | 129000 | 71800 | 66700 | 57600 | 138000 |
| MIN | 47500 | 15000 | 22300 | 18800 | 18200 | 18900 | 91800 | 76000 | 45900 | 47200 | 42700 | 37900 |
| CFSM | 1.15 | .61 | .47 | .42 | .37 | .64 | 2.08 | 1.83 | .93 | .94 | .82 | 1.17 |
| IN. | 1.33 | .68 | .55 | .49 | .38 | .74 | 2.32 | 2.17 | 1.03 | 1.09 | .95 | 1.31 |

CAL YR 1985 TOTAL 16011400 MEAN 43870 MAX 101000 MIN 15000 CFSM .74 IN 10.06
WTR YR 1986 TOTAL 20748900 MEAN 56850 MAX 166000 MIN 15000 CFSM .96 IN 13.04

## 05378500 MISSISSIPPI RIVER AT WINONA, MN--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1963 to August 1986 (discontinued).
SPECIFIC CONDUCTANCE: Water years 1980 to September 1984 (discontinued).
WATER TEMPERATURES: Water years 1976 to current year.
SUSPENDED-SEDIMENT DISCHARGE: Water years 1976 to current year.

REMARKS.--Daily sediment concentrations and loads were estimated on the basis of water records and sediment samples that were collected weekly during April 1 to September 30. No samples were collected October 1 to May 31. Water temperature was measured at the time of sample collection. Letter K indicates a non-ideal colony count.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095) | SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095) | PH (STAND-ARD UNITS) (00400) | PH LAB (STAND-ARD UNITS) (00403) | TEMPER-ATURE, AIR (DEG C) (00020) | TEMPER-ATURE (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | BARO-METRIC PRES-SURE (MM OF HG) (00025) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | 1050 | 24500 | 390 | 395 | 8.30 | 7.70 | -1.5 | 1.0 | 4.0 | 766 |
| JAN , 1986<br>14... | 1315 | 26000 | 400 | 446 | 7.70 | 7.70 | -4.0 | 0.0 | 2.6 | 773 |
| APR<br>09... | 1500 | 161000 | 370 | 350 | 7.90 | 7.80 | 12.0 | 8.0 | 4.5 | 770 |
| AUG<br>20... | 1345 | 52700 | 340 | 358 | 8.20 | 8.20 | 25.5 | 23.5 | 6.6 | 772 |

| DATE | OXYGEN, DIS-SOLVED (MG/L) (00300) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3 (00410) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | 14.9 | K11 | K9 | 48 | 19 | 9.1 | 2.0 | 148 | 146 | -- |
| JAN , 1986<br>14... | 13.4 | K19 | K8 | 51 | 20 | 11 | 2.5 | 182 | 166 | 182 |
| APR<br>09... | 11.0 | K20 | K24 | 41 | 13 | 5.8 | 3.7 | 124 | 123 | 125 |
| AUG<br>20... | 7.4 | 83 | 510 | 41 | 17 | 7.5 | 2.6 | 128 | 136 | 129 |

## 05378500 MISSISSIPPI RIVER AT WINONA, MN--Continued

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618) | NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | -- | -- | 39 | 14 | 0.2 | 10 | 245 | 1.49 | 0.01 |
| JAN , 1986<br>14... | 222 | 0 | 34 | 16 | 0.2 | 15 | 264 | 1.58 | 0.02 |
| APR<br>09... | 152 | 0 | 29 | 8.9 | 0.2 | 12 | 216 | 2.17 | 0.03 |
| AUG<br>20... | 157 | 0 | 39 | 9.1 | 0.2 | 13 | 228 | 0.71 | 0.04 |

| DATE | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | SEDIMENT, SUSPENDED (MG/L) (80154) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | 1.50 | 0.06 | 0.05 | 0.8 | 0.13 | 0.04 | 0.03 | -- | -- |
| JAN , 1986<br>14... | 1.60 | 0.46 | 0.45 | 1.1 | 0.09 | 0.07 | 0.07 | -- | -- |
| APR<br>09... | 2.20 | 0.21 | 0.20 | 0.9 | 0.14 | 0.08 | 0.06 | -- | -- |
| AUG<br>20... | 0.75 | 0.09 | 0.02 | 0.9 | 0.14 | 0.09 | 0.08 | 16 | 99 |

| DATE | TIME | ALUMINUM, DISSOLVED (UG/L AS AL) (01106) | ARSENIC DISSOLVED (UG/L AS AS) (01000) | BARIUM, DISSOLVED (UG/L AS BA) (01005) | BERYLLIUM, DISSOLVED (UG/L AS BE) (01010) | CADMIUM DISSOLVED (UG/L AS CD) (01025) | CHROMIUM, DISSOLVED (UG/L AS CR) (01030) | COBALT, DISSOLVED (UG/L AS CO) (01035) | COPPER, DISSOLVED (UG/L AS CU) (01040) | IRON, DISSOLVED (UG/L AS FE) (01046) | LEAD, DISSOLVED (UG/L AS PB) (01049) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | 1050 | 20 | <1 | 38 | 2 | <1 | <1 | <3 | 2 | 100 | 3 |
| JAN , 1986<br>14... | 1315 | 10 | <1 | 44 | 0.6 | <1 | <1 | <3 | <1 | 110 | 4 |
| AUG<br>20... | 1345 | <10 | 2 | 43 | <0.5 | <1 | <1 | <3 | 1 | 43 | 30 |

| DATE | LITHIUM DISSOLVED (UG/L AS LI) (01130) | MANGANESE, DISSOLVED (UG/L AS MN) (01056) | MERCURY DISSOLVED (UG/L AS HG) (71890) | MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060) | NICKEL, DISSOLVED (UG/L AS NI) (01065) | SELENIUM, DISSOLVED (UG/L AS SE) (01145) | SILVER, DISSOLVED (UG/L AS AG) (01075) | STRONTIUM, DISSOLVED (UG/L AS SR) (01080) | VANADIUM, DISSOLVED (UG/L AS V) (01085) | ZINC, DISSOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985<br>25... | <4 | 26 | <0.1 | <10 | 2 | <1 | <1 | 120 | <6 | 62 |
| JAN , 1986<br>14... | 11 | 88 | 3.0 | <10 | 3 | <1 | <1 | 130 | <6 | 4 |
| AUG<br>20... | 12 | 3 | <0.1 | <10 | 2 | <1 | <1 | 110 | <6 | 42 |

| DATE | TIME | DISCHARGE, IN CUBIC FEET PER SECOND (00060) | NUMBER OF SAMPLING POINTS (00063) | BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164) | BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165) | BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166) | BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167) | BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168) | BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169) | BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170) | BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171) | BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986<br>09... | 1500 | 161000 | 4 | <1 | <1 | 3 | 49 | 88 | 95 | 97 | 99 | 100 |

### 05378500 MISSISSIPPI RIVER AT WINONA, MN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | --- | | | 7.0 | --- | --- | --- | --- | --- |
| 2 | | | | --- | | | --- | --- | --- | 24.0 | --- | --- |
| 3 | | | | --- | | | --- | --- | 21.0 | --- | --- | 21.5 |
| 4 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 5 | | | | --- | | | --- | 15.0 | --- | --- | --- | --- |
| 6 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 7 | | | | --- | | | --- | --- | --- | --- | --- | 18.0 |
| 8 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 9 | | | | --- | | | --- | --- | --- | 25.0 | 24.0 | --- |
| 10 | | | | --- | | | 7.0 | --- | --- | --- | --- | --- |
| 11 | | | | --- | | | 8.5 | --- | 20.0 | --- | --- | --- |
| 12 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 13 | | | | --- | | | --- | 16.0 | --- | --- | --- | --- |
| 14 | | | | --- | | | --- | --- | --- | --- | --- | 18.0 |
| 15 | | | | .0 | | | --- | --- | --- | --- | --- | --- |
| 16 | | | | --- | | | 7.5 | --- | --- | --- | 23.0 | --- |
| 17 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 18 | | | | --- | | | --- | --- | 21.5 | 28.0 | --- | --- |
| 19 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 20 | | | | --- | | | --- | 18.0 | --- | --- | --- | --- |
| 21 | | | | --- | | | --- | --- | --- | --- | 22.0 | 18.0 |
| 22 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 23 | | | | --- | | | 9.5 | --- | --- | --- | --- | --- |
| 24 | | | | --- | | | --- | --- | --- | 27.0 | 22.5 | --- |
| 25 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 26 | | | | --- | | | 17.5 | --- | --- | --- | --- | --- |
| 27 | | | | --- | | | --- | 18.0 | --- | --- | --- | --- |
| 28 | | | | --- | | | --- | --- | --- | --- | --- | 18.0 |
| 29 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 30 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| 31 | | | | --- | | | --- | --- | --- | --- | --- | --- |
| MEAN | | | | .0 | | | 9.5 | 17.0 | 21.0 | 26.0 | 23.0 | 18.5 |
| MAX | | | | .0 | | | 17.5 | 18.0 | 21.5 | 28.0 | 24.0 | 21.5 |
| MIN | | | | .0 | | | 7.0 | 15.0 | 20.0 | 24.0 | 22.0 | 18.0 |

WTR YR 1986 MEAN 17.5 MAX 28.0 MIN .0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
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| 16 | | | | | | | | | | | | |
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| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |

05378500 MISSISSIPPI RIVER AT WINONA, MN--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 56 | 14800 | 25 | 6750 | 18 | 3490 | 17 | 3060 | 19 | 2950 | 13 | 1470 |
| 2 | 63 | 18900 | 23 | 6640 | 18 | 3230 | 17 | 3050 | 20 | 3110 | 12 | 1260 |
| 3 | 68 | 23100 | 22 | 6830 | 17 | 2870 | 17 | 3020 | 21 | 3150 | 13 | 1330 |
| 4 | 72 | 27000 | 20 | 6480 | 17 | 2790 | 18 | 3060 | 21 | 2910 | 16 | 1640 |
| 5 | 77 | 31800 | 18 | 5930 | 16 | 2620 | 18 | 2960 | 21 | 2780 | 18 | 1890 |
| 6 | 83 | 36500 | 17 | 5690 | 17 | 2640 | 19 | 3110 | 21 | 2770 | 20 | 2100 |
| 7 | 80 | 35900 | 17 | 5690 | 17 | 2490 | 19 | 3140 | 21 | 2730 | 23 | 2480 |
| 8 | 60 | 26700 | 16 | 5310 | 16 | 2270 | 19 | 3060 | 21 | 2740 | 24 | 2630 |
| 9 | 39 | 17000 | 17 | 5550 | 15 | 1990 | 19 | 2860 | 22 | 2830 | 26 | 2870 |
| 10 | 22 | 9210 | 17 | 5420 | 14 | 1740 | 19 | 2640 | 20 | 2590 | 27 | 3160 |
| 11 | 20 | 7990 | 16 | 5010 | 13 | 1650 | 19 | 2520 | 19 | 2470 | 28 | 3660 |
| 12 | 20 | 7670 | 16 | 4920 | 13 | 1680 | 19 | 2490 | 18 | 2350 | 29 | 3980 |
| 13 | 19 | 7030 | 16 | 4920 | 14 | 1840 | 19 | 2460 | 17 | 2220 | 29 | 4230 |
| 14 | 18 | 6420 | 15 | 4660 | 15 | 1980 | 19 | 2420 | 15 | 1970 | 30 | 4600 |
| 15 | 17 | 5880 | 16 | 5050 | 15 | 1950 | 18 | 2300 | 14 | 1850 | 31 | 4830 |
| 16 | 16 | 5400 | 16 | 5270 | 15 | 1910 | 18 | 2380 | 13 | 1730 | 31 | 4790 |
| 17 | 16 | 5230 | 16 | 5440 | 15 | 1910 | 18 | 2440 | 17 | 2310 | 32 | 4810 |
| 18 | 17 | 5320 | 16 | 5530 | 14 | 1810 | 17 | 2340 | 18 | 2590 | 32 | 4800 |
| 19 | 16 | 4840 | 16 | 5570 | 14 | 1830 | 16 | 2290 | 17 | 2480 | 32 | 4990 |
| 20 | 16 | 4800 | 16 | 5530 | 15 | 1940 | 14 | 2060 | 16 | 2280 | 33 | 5300 |
| 21 | 16 | 4710 | 16 | 5360 | 16 | 2060 | 12 | 1840 | 15 | 2050 | 33 | 5690 |
| 22 | 15 | 4290 | 16 | 5140 | 16 | 2160 | 15 | 2350 | 14 | 1780 | 39 | 7900 |
| 23 | 14 | 3860 | 16 | 4880 | 16 | 2250 | 17 | 2640 | 13 | 1550 | 44 | 10500 |
| 24 | 15 | 4030 | 16 | 4620 | 16 | 2350 | 18 | 2710 | 12 | 1390 | 50 | 14200 |
| 25 | 15 | 3980 | 16 | 4410 | 19 | 3020 | 18 | 2700 | 12 | 1380 | 42 | 13600 |
| 26 | 15 | 3900 | 16 | 4140 | 19 | 3150 | 19 | 2830 | 12 | 1440 | 35 | 12600 |
| 27 | 20 | 5100 | 15 | 3630 | 18 | 3070 | 19 | 2850 | 13 | 1620 | 30 | 11200 |
| 28 | 29 | 7250 | 16 | 3650 | 18 | 3110 | 19 | 2890 | 13 | 1660 | 29 | 10800 |
| 29 | 27 | 6690 | 17 | 3770 | 18 | 3210 | 19 | 2880 | 13 | 1600 | 29 | 10600 |
| 30 | 26 | 6630 | 17 | 3640 | 18 | 3290 | 19 | 2890 | 13 | 1530 | 29 | 10600 |
| 31 | --- | --- | 18 | 3690 | --- | --- | 18 | 2750 | 13 | 1520 | --- | --- |
| TOTAL | --- | 351930 | --- | 159120 | --- | 72300 | --- | 82990 | --- | 68330 | --- | 174510 |

TOTAL LOAD FOR YEAR: 909180 TONS.

## 442129091251100 BUGLE LAKE AT INDEPENDENCE, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 44°21'29", long 91°25'11", in NW 1/4 sec.25, T.22 N., R.9 W., Trempealeau County, Hydrologic Unit 07040005, at dam at Independence.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Ralph Wiersgalla. Elevation of gage is 779 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 1.90 ft, Sept. 9, 30, 1985; minimum observed, 1.60 ft, many days in July and August 1985, and Apr. 15, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 1.80 ft, many days during October, November, June, August, and September; minimum observed, 1.60 ft, Apr. 15.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.70 | 1.80 | | | | | 1.70 | 1.70 | --- | 1.70 | 1.70 | --- |
| 2 | 1.70 | 1.80 | | | | | 1.70 | 1.70 | 1.70 | 1.70 | --- | 1.70 |
| 3 | 1.70 | --- | | | | | 1.70 | --- | 1.70 | 1.70 | --- | --- |
| 4 | 1.80 | 1.70 | | | | | 1.70 | --- | 1.70 | --- | --- | --- |
| 5 | 1.80 | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 6 | --- | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 7 | 1.70 | 1.70 | | | | | 1.70 | 1.70 | --- | 1.70 | --- | --- |
| 8 | 1.70 | 1.70 | | | | | 1.70 | 1.70 | --- | 1.70 | --- | --- |
| 9 | 1.70 | 1.70 | | | | | 1.70 | 1.70 | 1.70 | 1.70 | --- | --- |
| 10 | 1.70 | --- | | | | | 1.70 | --- | 1.70 | 1.70 | --- | --- |
| 11 | 1.70 | 1.70 | | | | | 1.70 | --- | 1.70 | 1.70 | --- | --- |
| 12 | 1.80 | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 13 | --- | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 14 | 1.70 | 1.70 | | | | | 1.70 | 1.70 | --- | 1.70 | --- | --- |
| 15 | 1.70 | 1.70 | | | | | 1.60 | 1.70 | --- | --- | 1.80 | 1.80 |
| 16 | 1.70 | 1.70 | | | | | 1.70 | 1.70 | 1.70 | --- | --- | --- |
| 17 | 1.70 | --- | | | | | 1.70 | --- | 1.70 | --- | --- | --- |
| 18 | 1.70 | 1.70 | | | | | 1.70 | --- | 1.70 | --- | --- | --- |
| 19 | 1.70 | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 20 | --- | 1.70 | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 21 | 1.70 | --- | | | | | 1.70 | 1.70 | --- | --- | --- | --- |
| 22 | 1.70 | --- | | | | | 1.70 | 1.70 | --- | --- | --- | --- |
| 23 | 1.70 | --- | | | | | 1.70 | 1.70 | 1.70 | --- | --- | --- |
| 24 | 1.70 | --- | | | | | 1.70 | --- | 1.70 | --- | --- | --- |
| 25 | 1.70 | --- | | | | | 1.70 | --- | 1.70 | --- | --- | --- |
| 26 | 1.70 | --- | | | | | --- | 1.70 | 1.70 | --- | --- | --- |
| 27 | --- | --- | | | | | --- | 1.70 | 1.80 | --- | --- | --- |
| 28 | 1.70 | --- | | | | | 1.70 | 1.70 | --- | --- | --- | --- |
| 29 | 1.70 | --- | | | | | 1.70 | 1.70 | --- | --- | --- | --- |
| 30 | 1.70 | --- | | | | | 1.70 | 1.70 | 1.70 | --- | --- | 1.80 |
| 31 | 1.70 | --- | | | | | --- | --- | --- | --- | --- | --- |

### WATER-QUALITY RECORDS

LOCATION.--Lat 44°21'37", long 91°25'20", in NW 1/4 sec.25, T.22 N., R.9 W., Trempealeau County, Hydrologic Unit 07040005, near center of lake, at Independence.

PERIOD OF RECORD.--July 1985 to current year.

REMARKS.--Secchi disc readings made by Ralph Wiersgalla.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 1 | 1.5 | OCT. 11 | 1.5 | OCT. 22 | 1.2 | NOV. 1 | 0.9 | NOV. 12 | 1.2 | APR. 30 | 0.6 |
| OCT. 2 | 1.5 | OCT. 12 | 0.9 | OCT. 23 | 1.2 | NOV. 2 | 0.9 | NOV. 13 | 1.2 | MAY 15 | 1.2 |
| OCT. 3 | 1.2 | OCT. 14 | 1.2 | OCT. 24 | 1.2 | NOV. 4 | 1.2 | NOV. 14 | 1.2 | MAY 30 | 1.2 |
| OCT. 4 | 0.9 | OCT. 15 | 1.2 | OCT. 25 | 1.2 | NOV. 5 | 1.2 | NOV. 15 | 1.2 | JUNE 13 | 1.2 |
| OCT. 5 | 1.2 | OCT. 16 | 1.5 | OCT. 26 | 1.2 | NOV. 6 | 1.2 | NOV. 16 | 0.9 | JULY 11 | 0.3 |
| OCT. 7 | 1.5 | OCT. 17 | 0.9 | OCT. 28 | 1.5 | NOV. 7 | 1.5 | NOV. 18 | 0.9 | AUG. 1 | 1.2 |
| OCT. 8 | 1.2 | OCT. 18 | 1.2 | OCT. 29 | 1.2 | NOV. 8 | 1.2 | NOV. 19 | 1.2 | AUG. 15 | 0.8 |
| OCT. 9 | 1.2 | OCT. 20 | 1.2 | OCT. 30 | 1.2 | NOV. 9 | 1.2 | NOV. 20 | 1.2 | SEPT. 2 | 1.2 |
| OCT. 10 | 1.5 | OCT. 21 | 1.2 | OCT. 31 | 1.2 | NOV. 11 | 1.2 | APR. 2 | 1.2 | SEPT. 15 | 0.6 |
| | | | | | | | | APR. 16 | 1.2 | SEPT. 30 | 0.6 |

## 05379500 TREMPEALEAU RIVER AT DODGE, WI

LOCATION.--Lat 44°07'55", long 91°33'14", in SE 1/4 sec.10, T.19 N., R.10 W., Trempealeau County, Hydrologic Unit 07040005, near left bank on downstream side of highway bridge in Dodge, 9.0 mi upstream from mouth.

DRAINAGE AREA.--643 mi$^2$.

PERIOD OF RECORD.--December 1913 to September 1919, April 1934 to current year.

REVISED RECORDS.--WSP 1238: Drainage area. WSP 1388: 1919(M). WSP 1438: 1914, 1915-18(M), 1934-44(M), 1946-49(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 661.42 ft above National Geodetic Vertical Datum of 1929. Prior to July 14, 1977, nonrecording gage at same site and datum. Prior to Oct. 1, 1966, datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records are good except those for ice-affected period, which is fair. Gage-height telemeter and data-collection platform at station.

AVERAGE DISCHARGE.--57 years (1915-19, 1935-86), 429 ft$^3$/s, 9.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft$^3$/s Apr. 4, 1956, gage height, 10.35 ft; minimum daily, 98 ft$^3$/s Jan. 10, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 21 | 0600 | 1,930 | 7.81 | Sept. 24 | 1000 | *4,920 | *10.83 |
| July 1 | 1100 | 1,830 | 7.82 | | | | |

Minimum daily discharge, 300 ft$^3$/s Feb. 9-15, Mar. 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used June 17 to Sept. 30; stage-discharge relation affected by ice Nov. 23 to Mar. 16.)

| | | | |
|---|---|---|---|
| 3.0 | 294 | 7.0 | 1,520 |
| 3.6 | 383 | 8.0 | 2,040 |
| 4.0 | 483 | 9.0 | 2,750 |
| 5.0 | 777 | 10.0 | 4,200 |
| 6.0 | 1,120 | 10.5 | 5,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 916 | 522 | 470 | 340 | 310 | 310 | 798 | 661 | 395 | 1780 | 532 | 331 |
| 2 | 746 | 780 | 460 | 340 | 310 | 320 | 757 | 588 | 382 | 1050 | 459 | 327 |
| 3 | 614 | 732 | 450 | 340 | 310 | 330 | 717 | 540 | 373 | 675 | 420 | 327 |
| 4 | 562 | 642 | 450 | 330 | 320 | 340 | 776 | 517 | 369 | 567 | 396 | 354 |
| 5 | 670 | 548 | 440 | 330 | 330 | 350 | 837 | 507 | 398 | 512 | 376 | 373 |
| 6 | 724 | 507 | 440 | 330 | 330 | 340 | 887 | 491 | 386 | 517 | 363 | 349 |
| 7 | 613 | 493 | 430 | 330 | 320 | 320 | 814 | 472 | 383 | 603 | 365 | 332 |
| 8 | 566 | 482 | 430 | 330 | 310 | 300 | 716 | 459 | 378 | 499 | 541 | 325 |
| 9 | 551 | 485 | 430 | 330 | 300 | 310 | 650 | 465 | 370 | 454 | 590 | 322 |
| 10 | 529 | 487 | 420 | 350 | 300 | 310 | 609 | 500 | 370 | 429 | 483 | 452 |
| 11 | 503 | 478 | 420 | 350 | 300 | 320 | 584 | 481 | 393 | 416 | 455 | 955 |
| 12 | 500 | 471 | 410 | 360 | 300 | 320 | 565 | 475 | 402 | 428 | 404 | 1110 |
| 13 | 518 | 475 | 410 | 350 | 300 | 330 | 552 | 530 | 409 | 477 | 376 | 929 |
| 14 | 516 | 487 | 410 | 350 | 300 | 340 | 591 | 586 | 397 | 466 | 384 | 673 |
| 15 | 493 | 491 | 400 | 350 | 300 | 370 | 765 | 611 | 379 | 449 | 455 | 655 |
| 16 | 491 | 522 | 400 | 360 | 310 | 450 | 791 | 722 | 367 | 497 | 455 | 673 |
| 17 | 495 | 597 | 400 | 370 | 310 | 697 | 706 | 735 | 355 | 502 | 428 | 577 |
| 18 | 484 | 608 | 390 | 370 | 310 | 936 | 627 | 643 | 352 | 444 | 490 | 565 |
| 19 | 470 | 594 | 390 | 360 | 310 | 1430 | 588 | 550 | 353 | 461 | 413 | 729 |
| 20 | 460 | 590 | 390 | 340 | 310 | 1750 | 582 | 504 | 347 | 493 | 369 | 854 |
| 21 | 433 | 574 | 380 | 330 | 310 | 1820 | 575 | 476 | 359 | 446 | 348 | 1120 |
| 22 | 435 | 563 | 380 | 320 | 310 | 1420 | 564 | 457 | 452 | 392 | 339 | 1580 |
| 23 | 433 | 560 | 380 | 320 | 310 | 1310 | 539 | 443 | 482 | 367 | 341 | 2500 |
| 24 | 436 | 540 | 370 | 320 | 310 | 1400 | 517 | 435 | 414 | 364 | 336 | 4420 |
| 25 | 436 | 540 | 370 | 320 | 310 | 1490 | 512 | 480 | 376 | 486 | 336 | 3890 |
| 26 | 427 | 520 | 360 | 320 | 310 | 1420 | 650 | 463 | 368 | 511 | 350 | 3110 |
| 27 | 416 | 500 | 360 | 310 | 310 | 1470 | 755 | 448 | 638 | 515 | 383 | 2380 |
| 28 | 410 | 500 | 360 | 310 | 310 | 1440 | 819 | 426 | 1170 | 866 | 371 | 1820 |
| 29 | 406 | 490 | 350 | 310 | --- | 1170 | 851 | 413 | 1420 | 966 | 342 | 1350 |
| 30 | 402 | 480 | 350 | 310 | --- | 984 | 745 | 407 | 1700 | 820 | 334 | 1080 |
| 31 | 403 | --- | 350 | 310 | --- | 869 | --- | 403 | --- | 677 | 334 | --- |
| TOTAL | 16058 | 16258 | 12450 | 10390 | 8670 | 24966 | 20439 | 15888 | 14937 | 18129 | 12568 | 34462 |
| MEAN | 518 | 542 | 402 | 335 | 310 | 805 | 681 | 513 | 498 | 585 | 405 | 1149 |
| MAX | 916 | 780 | 470 | 370 | 330 | 1820 | 887 | 735 | 1700 | 1780 | 590 | 4420 |
| MIN | 402 | 471 | 350 | 310 | 300 | 300 | 512 | 403 | 347 | 364 | 334 | 322 |
| CFSM | .81 | .84 | .63 | .52 | .48 | 1.25 | 1.06 | .80 | .77 | .91 | .63 | 1.79 |
| IN. | .93 | .94 | .72 | .60 | .50 | 1.44 | 1.18 | .92 | .86 | 1.05 | .73 | 1.99 |

CAL YR 1985 TOTAL 208822 MEAN 572 MAX 6070 MIN 290 CFSM .89 IN 12.08
WTR YR 1986 TOTAL 205215 MEAN 562 MAX 4420 MIN 300 CFSM .87 IN 11.87

## 05380806 BLACK RIVER AT MEDFORD, WI

LOCATION.--Lat 45°08'09", long 90°20'45", in SE 1/4 SW 1/4 sec.27, T.31 N., R.1 E., Taylor County, Hydrologic Unit 07040007, on right bank 0.2 mi downstream from dam at outlet of Medford Flowage in Medford, and 2.1 mi upstream from Little Black River.

DRAINAGE AREA.--47.9 mi$^2$.

PERIOD OF RECORD.--September 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,395.22 ft above National Geodetic Vertical Daum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating tables below. Records good except those for ice-affected period, which is fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft$^3$/s Apr. 1, 1986, gage height, 5.08 ft; minimum, 0.88 ft$^3$/s June 6, 1986, gage height, 1.29 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 867 ft$^3$/s, Apr. 1, gage height, 5.08 ft; minimum, 0.88 ft$^3$/s, June 6, gage height, 1.29 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Mar. 23.)

| Oct. 1 to Aug. 4 | | | | Aug. 5 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 1.5 | 3.3 | 2.8 | 109 | 1.7 | 5.4 | 3.0 | 144 |
| 1.6 | 5.1 | 3.4 | 228 | 1.8 | 8.1 | 3.5 | 253 |
| 1.7 | 7.9 | 4.0 | 400 | 1.9 | 11.5 | 4.0 | 400 |
| 1.9 | 16 | 4.5 | 590 | 2.0 | 18 | 4.5 | 590 |
| 2.1 | 28 | 5.0 | 825 | 2.2 | 32 | 5.0 | 825 |
| 2.4 | 55 | | | 2.5 | 62 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 270 | 127 | 27 | 17 | 17 | 14 | 812 | 105 | 8.5 | 12 | 13 | 9.3 |
| 2 | 261 | 200 | 26 | 17 | 17 | 15 | 730 | 79 | 8.9 | 11 | 13 | 8.7 |
| 3 | 178 | 190 | 25 | 17 | 16 | 15 | 502 | 57 | 6.4 | 9.4 | 11 | 8.8 |
| 4 | 194 | 135 | 25 | 16 | 17 | 15 | 335 | 45 | 6.6 | 11 | 9.5 | 9.8 |
| 5 | 302 | 87 | 24 | 16 | 18 | 15 | 279 | 39 | 5.5 | 11 | 10 | 9.9 |
| 6 | 320 | 71 | 23 | 16 | 17 | 16 | 257 | 34 | 5.0 | 14 | 17 | 9.2 |
| 7 | 274 | 63 | 23 | 16 | 17 | 16 | 229 | 29 | 6.1 | 14 | 113 | 8.4 |
| 8 | 217 | 52 | 23 | 16 | 17 | 16 | 178 | 26 | 5.4 | 11 | 119 | 7.9 |
| 9 | 173 | 46 | 22 | 16 | 17 | 17 | 126 | 24 | 5.5 | 9.4 | 61 | 14 |
| 10 | 151 | 40 | 22 | 17 | 16 | 17 | 91 | 22 | 8.5 | 7.8 | 35 | 146 |
| 11 | 118 | 39 | 21 | 18 | 16 | 17 | 72 | 22 | 42 | 11 | 26 | 242 |
| 12 | 120 | 36 | 21 | 17 | 16 | 18 | 60 | 25 | 34 | 15 | 19 | 223 |
| 13 | 131 | 36 | 21 | 17 | 15 | 19 | 52 | 25 | 26 | 20 | 14 | 168 |
| 14 | 113 | 41 | 21 | 17 | 15 | 20 | 60 | 25 | 19 | 19 | 43 | 84 |
| 15 | 87 | 38 | 20 | 17 | 15 | 21 | 123 | 24 | 15 | 20 | 57 | 103 |
| 16 | 70 | 36 | 20 | 18 | 16 | 22 | 118 | 23 | 12 | 20 | 41 | 120 |
| 17 | 59 | 38 | 20 | 18 | 17 | 23 | 90 | 22 | 10 | 22 | 31 | 101 |
| 18 | 52 | 45 | 19 | 17 | 18 | 29 | 67 | 20 | 8.1 | 19 | 23 | 90 |
| 19 | 47 | 87 | 19 | 17 | 18 | 34 | 56 | 18 | 14 | 36 | 18 | 79 |
| 20 | 42 | 77 | 19 | 17 | 17 | 39 | 52 | 17 | 10 | 48 | 14 | 77 |
| 21 | 40 | 73 | 19 | 16 | 16 | 38 | 50 | 16 | 14 | 33 | 13 | 128 |
| 22 | 37 | 57 | 18 | 16 | 16 | 41 | 45 | 15 | 15 | 23 | 10 | 471 |
| 23 | 38 | 49 | 18 | 16 | 15 | 49 | 40 | 14 | 15 | 17 | 11 | 391 |
| 24 | 40 | 43 | 18 | 16 | 15 | 51 | 37 | 13 | 13 | 22 | 11 | 313 |
| 25 | 38 | 37 | 18 | 16 | 15 | 83 | 36 | 13 | 12 | 32 | 10 | 260 |
| 26 | 36 | 34 | 18 | 16 | 14 | 154 | 44 | 13 | 13 | 29 | 10 | 262 |
| 27 | 34 | 32 | 18 | 16 | 14 | 159 | 52 | 12 | 53 | 23 | 9.7 | 613 |
| 28 | 31 | 31 | 17 | 16 | 14 | 204 | 52 | 11 | 38 | 23 | 8.7 | 545 |
| 29 | 31 | 29 | 17 | 16 | --- | 383 | 63 | 11 | 22 | 20 | 7.8 | 412 |
| 30 | 29 | 28 | 17 | 16 | --- | 637 | 97 | 10 | 16 | 17 | 7.8 | 244 |
| 31 | 28 | --- | 17 | 16 | --- | 688 | --- | 9.8 | --- | 14 | 9.0 | --- |
| TOTAL | 3561 | 1897 | 636 | 513 | 451 | 2885 | 4805 | 818.8 | 467.5 | 593.6 | 795.5 | 5158.0 |
| MEAN | 115 | 63.2 | 20.5 | 16.5 | 16.1 | 93.1 | 160 | 26.4 | 15.6 | 19.1 | 25.7 | 172 |
| MAX | 320 | 200 | 27 | 18 | 18 | 688 | 812 | 105 | 53 | 48 | 119 | 613 |
| MIN | 28 | 28 | 17 | 16 | 14 | 14 | 36 | 9.8 | 5.0 | 7.8 | 7.8 | 7.9 |
| CFSM | 2.40 | 1.32 | .43 | .34 | .34 | 1.94 | 3.34 | .55 | .33 | .40 | .54 | 3.59 |
| IN. | 2.77 | 1.47 | .49 | .40 | .35 | 2.24 | 3.73 | .64 | .36 | .46 | .62 | 4.01 |

CAL YR 1985 TOTAL 22666.4 MEAN 62.1 MAX 468 MIN 1.6 CFSM 1.30 IN 17.60
WTR YR 1986 TOTAL 22581.4 MEAN 61.9 MAX 812 MIN 5.0 CFSM 1.29 IN 17.54

## 05381000 BLACK RIVER AT NEILLSVILLE, WI

**LOCATION.**--Lat 44°33'34", long 90°36'52", in sec.15, T.24 N., R.2 W., Clark County, Hydrologic Unit 07040007, on right bank at downstream side of bridge on U.S. Highway 10 in Neillsville, 1.0 mi downstream from O'Neill Creek, and 2.6 mi upstream from Cunningham Creek.

**DRAINAGE AREA.**--749 $mi^2$.

**PERIOD OF RECORD.**--April 1905 to March 1909, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

**REVISED RECORDS.**--WSP 1308: 1914. WSP 1438: 1905, 1906-8(M), 1914-17(M), 1918-19, 1920-25(M), 1926-27, 1928-29(M), 1930, 1931(M), 1932, 1933(M), 1934, 1935(M), 1936. WSP 1508: 1950. WDR WI-81-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 962.34 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1934, nonrecording gage; Oct. 24, 1934, to June 16, 1977, water-stage recorder; June 17, 1977, to Nov. 19, 1977, nonrecording gage at site 150 ft downstream at datum 1.58 ft lower.

**REMARKS.**--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair.

**AVERAGE DISCHARGE.**--76 years (1906-8, 1914-86), 602 $ft^3/s$, 10.91 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 48,800 $ft^3/s$ Sept. 10, 1938, gage height, 23.8 ft; minimum, 0.6 $ft^3/s$ Aug. 15, 1936, gage height, 1.84 ft.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 5,000 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 26 | ---- | A 8,000 | ice jam | Sept. 22 | 0600 | *28,100 | *18.65 |
| Mar. 29 | 2300 | 10,300 | 12.21 | Sept. 25 | 1300 | 11,000 | 12.54 |
| Sept. 11 | 0645 | 6,490 | 10.16 | Sept. 28 | 0330 | 13,000 | 13.43 |

A Estimated, daily mean discharge (ice affected).

Minimum, 55 $ft^3/s$ June 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 20 to Mar. 27.)

| | | | |
|---|---|---|---|
| 2.7 | 55 | 6.0 | 1,500 |
| 3.0 | 104 | 7.0 | 2,370 |
| 3.5 | 224 | 9.0 | 4,740 |
| 4.0 | 392 | 11.0 | 7,940 |
| 5.0 | 850 | 14.0 | 14,300 |
| | | 17.0 | 22,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4410 | 1660 | 230 | 180 | 180 | 200 | 7030 | 911 | 75 | 224 | 309 | 175 |
| 2 | 3350 | 3960 | 220 | 180 | 180 | 200 | 5560 | 995 | 70 | 170 | 300 | 157 |
| 3 | 2320 | 3110 | 220 | 180 | 180 | 210 | 4580 | 804 | 66 | 137 | 273 | 154 |
| 4 | 1720 | 2210 | 210 | 180 | 190 | 210 | 3520 | 583 | 62 | 123 | 224 | 158 |
| 5 | 3800 | 1460 | 210 | 180 | 190 | 200 | 2760 | 447 | 59 | 126 | 189 | 161 |
| 6 | 3800 | 1020 | 200 | 180 | 190 | 200 | 2500 | 358 | 56 | 139 | 163 | 153 |
| 7 | 3140 | 797 | 200 | 180 | 190 | 200 | 2130 | 293 | 59 | 147 | 163 | 138 |
| 8 | 2430 | 668 | 190 | 180 | 180 | 200 | 1680 | 251 | 61 | 155 | 1360 | 131 |
| 9 | 1970 | 583 | 190 | 180 | 180 | 210 | 1250 | 222 | 61 | 135 | 2150 | 135 |
| 10 | 1610 | 506 | 190 | 190 | 180 | 210 | 942 | 204 | 56 | 115 | 1710 | 1710 |
| 11 | 1380 | 449 | 190 | 190 | 180 | 220 | 728 | 189 | 71 | 108 | 1020 | 5840 |
| 12 | 1160 | 399 | 190 | 190 | 180 | 220 | 586 | 188 | 68 | 134 | 601 | 4250 |
| 13 | 1320 | 405 | 190 | 190 | 180 | 220 | 501 | 193 | 201 | 249 | 420 | 2800 |
| 14 | 1310 | 415 | 190 | 190 | 170 | 220 | 590 | 208 | 360 | 272 | 922 | 1720 |
| 15 | 1080 | 412 | 190 | 190 | 170 | 230 | 1340 | 211 | 258 | 248 | 3440 | 1950 |
| 16 | 870 | 480 | 190 | 200 | 170 | 240 | 1700 | 237 | 182 | 559 | 2390 | 2070 |
| 17 | 689 | 591 | 190 | 200 | 180 | 250 | 1400 | 218 | 137 | 427 | 1430 | 1720 |
| 18 | 576 | 790 | 190 | 190 | 180 | 280 | 996 | 203 | 111 | 368 | 837 | 1810 |
| 19 | 511 | 1900 | 190 | 190 | 180 | 3000 | 754 | 185 | 97 | 320 | 574 | 1960 |
| 20 | 456 | 1600 | 190 | 180 | 180 | 2600 | 610 | 170 | 85 | 392 | 419 | 1920 |
| 21 | 418 | 1100 | 190 | 180 | 180 | 2000 | 521 | 151 | 82 | 462 | 333 | 3640 |
| 22 | 392 | 800 | 190 | 180 | 180 | 1700 | 448 | 136 | 91 | 391 | 274 | 20200 |
| 23 | 359 | 580 | 180 | 180 | 180 | 2500 | 392 | 128 | 132 | 290 | 240 | 13900 |
| 24 | 356 | 420 | 180 | 180 | 180 | 3500 | 347 | 121 | 171 | 432 | 213 | 7020 |
| 25 | 350 | 320 | 180 | 180 | 190 | 5400 | 310 | 111 | 153 | 3350 | 202 | 8640 |
| 26 | 336 | 280 | 180 | 180 | 190 | 9580 | 306 | 104 | 163 | 1860 | 223 | 5890 |
| 27 | 324 | 260 | 180 | 180 | 190 | 5200 | 330 | 102 | 822 | 1370 | 245 | 9890 |
| 28 | 299 | 250 | 180 | 180 | 190 | 6270 | 385 | 96 | 333 | 2620 | 217 | 11300 |
| 29 | 279 | 240 | 180 | 180 | --- | 9010 | 463 | 91 | 296 | 798 | 189 | 7180 |
| 30 | 261 | 230 | 180 | 180 | --- | 9190 | 561 | 86 | 309 | 516 | 167 | 4500 |
| 31 | 246 | --- | 180 | 180 | --- | 8370 | --- | 82 | --- | 398 | 154 | --- |
| TOTAL | 41522 | 27895 | 5960 | 5700 | 5090 | 72240 | 45220 | 8278 | 4747 | 17035 | 21351 | 121272 |
| MEAN | 1339 | 930 | 192 | 184 | 182 | 2330 | 1507 | 267 | 158 | 550 | 689 | 4042 |
| MAX | 4410 | 3960 | 230 | 200 | 190 | 9580 | 7030 | 995 | 822 | 3350 | 3440 | 20200 |
| MIN | 246 | 230 | 180 | 180 | 170 | 200 | 306 | 82 | 56 | 108 | 154 | 131 |
| CFSM | 1.79 | 1.24 | .26 | .25 | .24 | 3.11 | 2.01 | .36 | .21 | .73 | .92 | 5.40 |
| IN. | 2.06 | 1.39 | .30 | .28 | .25 | 3.59 | 2.25 | .41 | .24 | .85 | 1.06 | 6.02 |

CAL YR 1985 TOTAL 273863 MEAN 750 MAX 5380 MIN 56 CFSM 1.00 IN 13.60
WTR YR 1986 TOTAL 376310 MEAN 1031 MAX 20200 MIN 56 CFSM 1.38 IN 18.69

## 05382000 BLACK RIVER NEAR GALESVILLE, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

**LOCATION.**--Lat 44°04'22", long 91°17'41", in SW 1/4 sec.1, T.18 N., R.8 W., LaCrosse County, Hydrologic Unit 07040007, on left bank 1,000 ft upstream from bridge on U.S. Highway 53, 4.5 mi southeast of Galesville, and 4.8 mi downstream from Fleming Creek.

**DRAINAGE AREA.**--2,080 mi$^2$.

### WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--December 1931 to current year.

**REVISED RECORDS.**--WSP 1438: 1932-34, 1935-36(M). WDR WI-81-1: Drainage area.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 658.43 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 2, 1941, nonrecording gage on bridge 1,000 ft downstream at same datum. Apr. 3, 1941, to Oct. 1, 1971, water-stage recorder at site 1,100 ft downstream at same datum.

**REMARKS.**--Estimated daily discharges: Oct. 1, June 28 to Aug. 19, and Sept. 9-30, and ice period listed in rating tables below. Records good except for estimated daily discharges, which are fair. Flow partly regulated by Hatfield Dam Powerplant where drainage area is 1,290 mi$^2$ and storage capacity is 272,000,000 ft$^3$. Water diverted periodically from basin into Lemonweir River basin for cranberry culture. Gage-height telemeter at station.

**AVERAGE DISCHARGE.**--54 years, 1,761 ft$^3$/s, 11.50 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 65,500 ft$^3$/s Apr. 1, 1967, gage height, 14.63 ft; maximum gage height, 15.46 ft Sept. 23, 1980; minimum observed, 180 ft$^3$/s Dec. 20, 1931

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 12,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 28 | 0400 | 24,200 | 13.55 | Sept. 24 | ---- | *43,600 | *15.14 |
| Apr. 1 | 0500 | 15,100 | 11.99 | | | | |

Minimum discharge, 458 ft$^3$/s, June 10, gage height, 2.13 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Nov. 4, May 13 to June 27; stage-discharge relation affected by ice Nov. 22 to Mar. 21.)

Oct. 1 to Nov. 4

| | |
|---|---|
| 3.0 | 840 |
| 4.0 | 1,540 |
| 6.0 | 3,550 |
| 8.0 | 6,260 |

Nov. 5 to Sept. 30

| | | | |
|---|---|---|---|
| 2.0 | 480 | 10.0 | 9,700 |
| 3.0 | 1,040 | 12.0 | 15,100 |
| 4.0 | 1,840 | 13.0 | 20,100 |
| 6.0 | 3,900 | 14.0 | 28,100 |
| 8.0 | 6,500 | 15.0 | 41,100 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3300 | 1220 | 1200 | 940 | 960 | 1200 | 14500 | 2020 | 627 | 3500 | 3000 | 904 |
| 2 | 4850 | 1870 | 1100 | 940 | 960 | 1200 | 12700 | 2080 | 554 | 2000 | 2300 | 865 |
| 3 | 5870 | 4250 | 1100 | 920 | 960 | 1300 | 10800 | 2200 | 520 | 1500 | 1700 | 792 |
| 4 | 5340 | 5800 | 1100 | 920 | 960 | 1200 | 8700 | 2120 | 562 | 1100 | 1500 | 769 |
| 5 | 4160 | 6110 | 1100 | 920 | 960 | 1100 | 7830 | 1950 | 563 | 860 | 1400 | 863 |
| 6 | 3980 | 5080 | 1100 | 920 | 940 | 1000 | 7380 | 1800 | 584 | 700 | 1400 | 867 |
| 7 | 4960 | 3780 | 1000 | 920 | 920 | 980 | 6280 | 1620 | 539 | 720 | 1200 | 812 |
| 8 | 5320 | 2860 | 1000 | 920 | 900 | 960 | 6060 | 1190 | 563 | 840 | 1300 | 672 |
| 9 | 4630 | 2430 | 1000 | 920 | 880 | 940 | 5230 | 1230 | 520 | 900 | 1200 | 600 |
| 10 | 3830 | 2330 | 980 | 920 | 880 | 960 | 4090 | 1210 | 540 | 920 | 1500 | 900 |
| 11 | 3080 | 2180 | 980 | 920 | 880 | 980 | 3170 | 1130 | 568 | 860 | 3100 | 960 |
| 12 | 2770 | 2010 | 980 | 920 | 860 | 980 | 2680 | 1030 | 584 | 820 | 2900 | 1500 |
| 13 | 2520 | 1740 | 980 | 920 | 860 | 1000 | 2450 | 1020 | 682 | 780 | 2300 | 9400 |
| 14 | 2230 | 1800 | 980 | 900 | 860 | 1100 | 2170 | 1040 | 659 | 600 | 2000 | 8800 |
| 15 | 2300 | 1850 | 960 | 900 | 860 | 1100 | 2290 | 1050 | 647 | 800 | 1800 | 6000 |
| 16 | 2260 | 1930 | 960 | 900 | 840 | 1100 | 3310 | 1080 | 580 | 1400 | 1600 | 4200 |
| 17 | 2080 | 2060 | 960 | 900 | 840 | 1200 | 4060 | 1120 | 558 | 1600 | 5200 | 3800 |
| 18 | 1860 | 2630 | 960 | 900 | 840 | 1200 | 4220 | 1240 | 679 | 1400 | 4600 | 4500 |
| 19 | 1550 | 2970 | 940 | 900 | 840 | 1300 | 3680 | 1190 | 654 | 1700 | 3900 | 3900 |
| 20 | 1530 | 3640 | 940 | 900 | 840 | 2500 | 2920 | 1010 | 582 | 1600 | 2470 | 3800 |
| 21 | 1480 | 4320 | 940 | 940 | 840 | 5000 | 2570 | 1110 | 576 | 1300 | 1700 | 4200 |
| 22 | 1390 | 3700 | 940 | 960 | 820 | 7530 | 2280 | 985 | 592 | 1400 | 1230 | 5200 |
| 23 | 1220 | 3000 | 940 | 960 | 820 | 7670 | 1900 | 949 | 526 | 1700 | 1120 | 7000 |
| 24 | 1280 | 2300 | 940 | 960 | 820 | 6850 | 1860 | 901 | 515 | 1500 | 1030 | 32000 |
| 25 | 1270 | 1900 | 940 | 960 | 960 | 7830 | 1850 | 888 | 537 | 1400 | 998 | 31000 |
| 26 | 1270 | 1500 | 940 | 960 | 920 | 9890 | 1880 | 815 | 561 | 1300 | 996 | 21000 |
| 27 | 1250 | 1200 | 940 | 960 | 940 | 16800 | 1730 | 688 | 1050 | 3000 | 1010 | 18000 |
| 28 | 1210 | 700 | 940 | 960 | 1100 | 21200 | 1740 | 694 | 2700 | 3800 | 978 | 17000 |
| 29 | 1180 | 1200 | 940 | 960 | --- | 15900 | 1850 | 805 | 8600 | 2800 | 949 | 16000 |
| 30 | 1170 | 1300 | 940 | 960 | --- | 14100 | 1910 | 711 | 5800 | 9000 | 931 | 19000 |
| 31 | 1120 | --- | 940 | 960 | --- | 14400 | --- | 666 | --- | 5600 | 922 | --- |
| TOTAL | 82260 | 79660 | 30660 | 28840 | 25060 | 150470 | 134090 | 37542 | 33222 | 57400 | 58234 | 225304 |
| MEAN | 2654 | 2655 | 989 | 930 | 895 | 4854 | 4470 | 1211 | 1107 | 1852 | 1879 | 7510 |
| MAX | 5870 | 6110 | 1200 | 960 | 1100 | 21200 | 14500 | 2200 | 8600 | 9000 | 5200 | 32000 |
| MIN | 1120 | 700 | 940 | 900 | 820 | 940 | 1730 | 666 | 515 | 600 | 922 | 600 |
| CFSM | 1.28 | 1.28 | .48 | .45 | .43 | 2.33 | 2.15 | .58 | .53 | .89 | .90 | 3.61 |
| IN. | 1.47 | 1.42 | .55 | .52 | .45 | 2.69 | 2.40 | .67 | .59 | 1.03 | 1.04 | 4.03 |

CAL YR 1985 TOTAL 743053 MEAN 2036 MAX 10900 MIN 440 CFSM .98 IN 13.29
WTR YR 1986 TOTAL 942742 MEAN 2583 MAX 32000 MIN 515 CFSM 1.24 IN 16.86

## 05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TURBIDITY (NTU) (00076) | OXYGEN, DISSOLVED (MG/L) (00300) | BAROMETRIC PRESSURE (MM OF HG) (00025) | OXYGEN, DISSOLVED (PERCENT SATURATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>02... | 1550 | 5040 | -- | 112 | 7.00 | 10.0 | 5.0 | 10.5 | 754 | 94 |
| JAN , 1986<br>06... | 1300 | -- | 920 | 78 | 7.30 | .0 | 5.0 | 11.6 | 769 | 79 |
| MAR<br>06... | 1200 | -- | 1000 | 150 | 7.50 | .0 | 4.9 | 12.8 | 742 | 90 |
| APR<br>29... | 1400 | 1860 | -- | 100 | 6.80 | 14.0 | 3.5 | 9.7 | 743 | 97 |
| JUN<br>24... | 1200 | 485 | -- | 250 | 7.90 | 19.5 | 10 | 9.2 | 748 | 102 |
| SEP<br>03... | 1030 | 778 | -- | 130 | 6.20 | 20.0 | 6.0 | 8.5 | 745 | 96 |

| DATE | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARDNESS (MG/L AS CACO3) (00900) | HARDNESS, NONCARBONATE (MG/L CACO3) (00902) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM ADSORPTION RATIO (00931) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>02... | K3700 | K2700 | 41 | 11 | 9.5 | 4.1 | 3.3 | 14 | .2 | 4.1 |
| JAN , 1986<br>06... | 24 | 37 | 54 | 3 | 13 | 5.3 | 3.3 | 11 | .2 | 2.1 |
| MAR<br>06... | 25 | 43 | 60 | 14 | 14 | 6.0 | 4.0 | 12 | .2 | 2.0 |
| APR<br>29... | 500 | 250 | 40 | 11 | 9.4 | 3.9 | 2.8 | 13 | .2 | 2.1 |
| JUN<br>24... | -- | K2610 | 75 | 13 | 18 | 7.4 | 3.1 | 8 | .2 | 2.0 |
| SEP<br>03... | 300 | K57 | 59 | 11 | 14 | 5.9 | 3.1 | 10 | .2 | 2.4 |

| DATE | BICARBONATE IT-FLD (MG/L AS HCO3) (99440) | CARBONATE IT-FLD (MG/L AS CO3) (99445) | ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DISSOLVED (MG/L AS CO2) (00405) | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>02... | 36 | -- | 29 | 5.7 | 7.9 | 7.2 | <.10 | 8.9 | 89 |
| JAN , 1986<br>06... | 63 | -- | 51 | 5.0 | 11 | 6.6 | <.10 | 13 | 82 |
| MAR<br>06... | 56 | -- | 45 | 2.8 | 11 | 6.3 | <.10 | 14 | 86 |
| APR<br>29... | 35 | -- | 28 | 8.8 | 12 | 5.2 | <.10 | 6.6 | 74 |
| JUN<br>24... | 76 | -- | 61 | 1.5 | 11 | 5.4 | <.10 | 7.3 | 100 |
| SEP<br>03... | 59 | -- | 48 | 59 | 13 | 5.3 | .10 | 8.3 | 82 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | SOLIDS, DISSOLVED (TONS PER AC-FT) (70303) | SOLIDS, DISSOLVED (TONS PER DAY) (70302) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>02... | 64 | .12 | 1210 | .43 | .060 | .30 | .230 | .130 | .120 |
| JAN , 1986<br>06... | 89 | .11 | 204 | .84 | .160 | .80 | .110 | .060 | .060 |
| MAR<br>06... | 90 | .12 | 232 | .97 | .170 | .50 | .140 | .070 | .040 |
| APR<br>29... | 61 | .10 | 372 | .41 | .030 | .70 | .110 | .060 | .040 |
| JUN<br>24... | 92 | .14 | 131 | .42 | <.010 | .80 | .180 | .050 | .030 |
| SEP<br>03... | 81 | .11 | 172 | .24 | .020 | .80 | .170 | .060 | .040 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 02... | 1550 | 5040 | -- | 60 | <1 | 27 | <.5 | 2 | 4 | <3 | 5 |
| MAR , 1986 | | | | | | | | | | | |
| 06... | 1200 | -- | 1000 | 50 | <1 | 23 | <.5 | <1 | <1 | <3 | 4 |
| JUN | | | | | | | | | | | |
| 24... | 1200 | 485 | -- | 10 | <1 | 23 | <.5 | <1 | <1 | <3 | 2 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | |
| 02... | 440 | 2 | <4 | 65 | <.1 | <10 | 5 | <1 | 31 | <6 | 5 |
| MAR , 1986 | | | | | | | | | | | |
| 06... | 700 | <1 | <4 | 53 | <.1 | <10 | 1 | <1 | 36 | <6 | 17 |
| JUN | | | | | | | | | | | |
| 24... | 24 | <5 | <4 | 33 | <.1 | <10 | 2 | <1 | 42 | <6 | 9 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 02... | 1550 | 5040 | -- | 112 | 10.0 | 106 | 1440 | 63 |
| NOV | | | | | | | | |
| 20... | 1125 | 3670 | -- | 95 | 1.5 | -- | -- | -- |
| JAN , 1986 | | | | | | | | |
| 06... | 1300 | -- | 920 | 78 | 0.0 | 6 | 15 | 72 |
| FEB | | | | | | | | |
| 18... | 1305 | 816 | -- | 160 | 0.0 | -- | -- | -- |
| MAR | | | | | | | | |
| 06... | 1200 | -- | 1000 | 150 | 0.0 | 10 | 27 | 79 |
| APR | | | | | | | | |
| 01 | 1030 | 14860 | -- | 90 | 8.5 | -- | -- | -- |
| 29... | 1400 | 1860 | -- | 100 | 14.0 | 18 | 90 | 93 |
| JUN | | | | | | | | |
| 03 | 1000 | 488 | -- | 150 | 18.0 | -- | -- | -- |
| 24... | 1200 | 485 | -- | 250 | 19.5 | 48 | 63 | 95 |
| JUL | | | | | | | | |
| 28 | 1200 | 3760 | -- | -- | 22.5 | -- | -- | -- |
| SEP | | | | | | | | |
| 03... | 1030 | 778 | -- | 130 | 20.0 | 67 | 141 | 33 |

## 435447091042600 NESHONOC LAKE AT WEST SALEM, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°54'47", long 91°04'26", in NE 1/4 sec.34, T.17 N., R.6 W., LaCrosse County, Hydrologic Unit 07040006, at U.S. Highway 16 over Neshonoc Lake, at West Salem.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Gary Willinger. Elevation of gage is 699 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.30 ft, Aug. 3, 1986; minimum observed, 7.74 ft, Nov. 8, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.30 ft, Aug. 3; minimum observed, 7.78 ft, May 3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 7 | 8.08 | APR. 27 | 7.95 | JUNE 14 | 7.93 | JUNE 29 | 8.05 | AUG. 3 | 8.30 | AUG. 31 | 8.10 |
| APR. 10 | 8.08 | MAY 3 | 7.78 | JUNE 18 | 7.98 | JULY 13 | 8.13 | AUG. 18 | 8.08 | SEPT. 14 | 8.10 |
| APR. 16 | 8.08 | MAY 14 | 7.90 | JUNE 22 | 8.05 | | | | | | |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°54'47", long 91°04'26", in NE 1/4 sec.34, T.17 N., R.6 W., LaCrosse County, Hydrologic Unit 07040006, at U.S. Highway 16 over Neshonoc Lake, at West Salem.

PERIOD OF RECORD.--April 1985 to current year.

REMARKS.--Secchi disc readings made by Gary Willinger.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR. 7 | 0.4 | APR. 27 | 0.5 | JUNE 14 | 0.4 | JUNE 29 | 0.6 | AUG. 3 | 0.4 | AUG. 31 | 0.5 |
| APR. 10 | 0.4 | MAY 3 | 0.4 | JUNE 18 | 0.4 | JULY 13 | 0.6 | AUG. 18 | 0.5 | SEPT. 14 | 0.3 |
| APR. 16 | 0.4 | MAY 14 | 0.4 | JUNE 22 | 0.4 | | | | | | |

## 05389500 MISSISSIPPI RIVER AT MCGREGOR, IA

LOCATION.--Lat 43°01'29", long 91°10'21", in SE 1/4 SE 1/4 sec.22, T.95 N., R.3 W., Clayton County, Hydrologic Unit 07060001, on right bank in city park at east end of Main Street in McGregor, 2.6 mi upstream from Wisconsin River, 4.3 mi downstream from Yellow River, and at mile 633.4 upstream from Ohio River.

DRAINAGE AREA.--67,500 $mi^2$, approximately.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1936 to current year.

REVISED RECORDS.--WDR IA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 604.84 ft above National Geodetic Vertical Datum. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937 to June 1, 1939, auxiliary nonrecording gage 14.1 mi upstream in tailwater of dam 9, at datum 5.30 ft lower.

REMARKS.--Estimated daily discharge: Nov. 29 to Mar. 19. Records good except those for periods of estimated daily discharge, which are fair. Stage-discharge relation affected by backwater from Wisconsin River and Lock and Dam No. 10. Minor flow regulation caused by navigation dams.

COOPERATION.--Auxillary gage-height and discharge data at Lock and Dam No. 9 furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--50 years, 35,670 $ft^3/s$, 7.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 276,000 $ft^3/s$ Apr. 24, 1965; maximum gage height, 25.38 ft Apr. 24, 1965; minimum daily discharge, 6,200 $ft^3/s$ Dec. 9, 1936; minimum gage height, -0.86 ft Aug. 18, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of Apr. 24, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 168,000 $ft^3/s$ Apr. 11; maximum gage height, 20.10 ft Apr. 10; minimum daily discharge, 19,000 $ft^3/s$ Dec. 1; minimum gage height, 7.7 ft Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 68300 | 55100 | 19000 | 30000 | 22000 | 23000 | 104000 | 105000 | 91000 | 72900 | 67400 | 46700 |
| 2 | 70700 | 54600 | 19500 | 30000 | 22000 | 23000 | 105000 | 104000 | 87300 | 75300 | 68700 | 45100 |
| 3 | 69800 | 55100 | 20000 | 30000 | 22000 | 23000 | 110000 | 106000 | 83000 | 76200 | 68600 | 43000 |
| 4 | 69500 | 55100 | 23000 | 30000 | 24000 | 23000 | 116000 | 109000 | 78100 | 76200 | 67200 | 42200 |
| 5 | 70800 | 53700 | 28000 | 30000 | 25000 | 23000 | 126000 | 113000 | 71200 | 74800 | 63900 | 41500 |
| 6 | 72800 | 52500 | 30000 | 30000 | 26000 | 24000 | 137000 | 118000 | 65700 | 73400 | 59600 | 40600 |
| 7 | 75900 | 53200 | 30000 | 30000 | 27000 | 24000 | 148000 | 121000 | 65000 | 71300 | 54200 | 40400 |
| 8 | 79900 | 57800 | 29000 | 30000 | 27000 | 23000 | 157000 | 124000 | 63700 | 67200 | 52200 | 40600 |
| 9 | 83400 | 62700 | 30000 | 30000 | 27000 | 23000 | 163000 | 125000 | 60400 | 65000 | 51200 | 40800 |
| 10 | 87300 | 63800 | 32000 | 28000 | 27000 | 23000 | 167000 | 125000 | 56200 | 62900 | 50800 | 42400 |
| 11 | 92200 | 62400 | 34000 | 27000 | 27000 | 24000 | 168000 | 125000 | 53700 | 60600 | 50700 | 46500 |
| 12 | 97900 | 56700 | 35000 | 25000 | 27000 | 24000 | 163000 | 124000 | 51200 | 57500 | 50300 | 50000 |
| 13 | 101000 | 49000 | 35000 | 25000 | 27000 | 25000 | 160000 | 122000 | 48700 | 54300 | 50100 | 55100 |
| 14 | 103000 | 46500 | 35000 | 26000 | 23000 | 27000 | 156000 | 121000 | 48700 | 51100 | 50900 | 59400 |
| 15 | 102000 | 44500 | 35000 | 27000 | 23000 | 29000 | 151000 | 118000 | 49500 | 49100 | 51900 | 64100 |
| 16 | 99500 | 43800 | 35000 | 28000 | 22000 | 31000 | 145000 | 121000 | 50400 | 50000 | 52300 | 68200 |
| 17 | 96700 | 43400 | 34000 | 28000 | 21000 | 32000 | 140000 | 123000 | 50500 | 50400 | 52300 | 70900 |
| 18 | 94900 | 42800 | 33000 | 28000 | 21000 | 33000 | 136000 | 124000 | 50500 | 50900 | 52800 | 72200 |
| 19 | 93700 | 42600 | 32000 | 28000 | 21000 | 45000 | 133000 | 126000 | 50200 | 52400 | 54200 | 71900 |
| 20 | 91600 | 43000 | 32000 | 28000 | 22000 | 64400 | 129000 | 129000 | 49500 | 54200 | 54900 | 71400 |
| 21 | 89200 | 43900 | 31000 | 28000 | 23000 | 69200 | 125000 | 130000 | 48700 | 56100 | 55700 | 72000 |
| 22 | 85900 | 45400 | 30000 | 28000 | 23000 | 70400 | 122000 | 129000 | 49900 | 57100 | 55800 | 75100 |
| 23 | 83100 | 46100 | 31000 | 28000 | 23000 | 71000 | 119000 | 128000 | 51400 | 59200 | 55000 | 81600 |
| 24 | 80500 | 39900 | 31000 | 28000 | 23000 | 72300 | 117000 | 125000 | 52700 | 62400 | 51100 | 91000 |
| 25 | 77100 | 37900 | 31000 | 27000 | 23000 | 76600 | 114000 | 122000 | 55000 | 65500 | 47400 | 103000 |
| 26 | 74300 | 36300 | 31000 | 27000 | 23000 | 81900 | 112000 | 118000 | 57600 | 65200 | 47700 | 120000 |
| 27 | 71300 | 33100 | 31000 | 27000 | 23000 | 85400 | 109000 | 114000 | 61300 | 64100 | 54100 | 136000 |
| 28 | 67800 | 27900 | 30000 | 25000 | 23000 | 87400 | 108000 | 110000 | 65000 | 64100 | 56500 | 145000 |
| 29 | 61500 | 24000 | 30000 | 24000 | --- | 91200 | 106000 | 104000 | 68000 | 63600 | 55200 | 153000 |
| 30 | 58800 | 21000 | 30000 | 24000 | --- | 98300 | 105000 | 98700 | 69700 | 63900 | 51200 | 157000 |
| 31 | 55900 | --- | 30000 | 23000 | --- | 102000 | --- | 94400 | --- | 65500 | 49600 | --- |
| TOTAL | 2526300 | 1393800 | 936500 | 857000 | 667000 | 1472100 | 3951000 | 3656100 | 1803800 | 1932400 | 1703500 | 2186700 |
| MEAN | 81490 | 46460 | 30210 | 27650 | 23820 | 47490 | 131700 | 117900 | 60130 | 62340 | 54950 | 72890 |
| MAX | 103000 | 63800 | 35000 | 30000 | 27000 | 102000 | 168000 | 130000 | 91000 | 76200 | 68700 | 157000 |
| MIN | 55900 | 21000 | 19000 | 23000 | 21000 | 23000 | 104000 | 94400 | 48700 | 49100 | 47400 | 40400 |
| CFSM | 1.21 | .69 | .45 | .41 | .35 | .70 | 1.95 | 1.75 | .89 | .92 | .81 | 1.08 |
| IN. | 1.39 | .77 | .52 | .47 | .37 | .81 | 2.18 | 2.01 | .99 | 1.06 | .94 | 1.21 |

CAL YR 1985 TOTAL 18849500 MEAN 51640 MAX 110000 MIN 19000 CFSM .77 IN. 10.39
WTR YR 1986 TOTAL 23086200 MEAN 63250 MAX 168000 MIN 19000 CFSM .94 IN. 12.72

## 05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected by boat 1.5 mi downstream from discharge station. Prior to April 1981, at bridge on U.S. Highway 18, 1.2 mi upstream from gage.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1975 to current year.
WATER TEMPERATURES: July 1975 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1975 to current year.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2350 mg/L Mar. 19, 1986; minimum daily mean, 1 mg/L Dec. 23-25, 1976; Dec. 20, 28, 1977; Feb. 13-17, 23, Mar. 5-9, 1986.
SEDIMENT LOADS: Maximum daily, 363,000 tons Mar. 19, 1986; minimum daily, 31 tons Dec. 25, 1976.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2350 mg/L Mar. 19; minimum daily mean, 1 mg/L Feb. 13-17, 23, Mar. 5-9.
SEDIMENT LOADS: Maximum daily, 363,000 tons Mar. 19; minimum daily, 92 tons Feb. 17.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | TEMPER- ATURE (DEG C) (00010) | STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061) | SEDI- MENT, SUS- PENDED (MG/L) (80154) | SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | |
| 22... | 16:00 | 12.0 | 76100 | 34 | 6990 | 96 |
| APR , 1986 | | | | | | |
| 02... | 14:30 | 11.0 | 98300 | 46 | 12200 | 86 |
| MAY | | | | | | |
| 13... | 15:00 | 18.0 | 120000 | 22 | 7130 | 93 |

| DATE | TIME | STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061) | NUMBER OF SAM- PLING POINTS (00063) | BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164) | BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165) | BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166) | BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167) |
|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | |
| 22... | 16:00 | 76100 | 6 | 2 | 7 | 40 | 87 |
| APR , 1986 | | | | | | | |
| 02... | 14:30 | 98300 | 6 | 15 | 24 | 66 | 93 |
| MAY | | | | | | | |
| 13... | 15:00 | 120000 | 6 | 0 | 2 | 25 | 78 |

| DATE | BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168) | BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169) | BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170) | BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171) | BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172) | BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173) |
|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | |
| 22... | 94 | 96 | 96 | 97 | 98 | 100 |
| APR , 1986 | | | | | | |
| 02... | 97 | 98 | 99 | 100 | -- | -- |
| MAY | | | | | | |
| 13... | 88 | 96 | 99 | 100 | -- | -- |

## 05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

### SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C.), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
RANDOM VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 390 | 440 | 420 | --- | 425 | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | 400 | --- | --- | --- | --- | --- | 350 |
| 3 | --- | --- | --- | --- | --- | --- | 360 | --- | 380 | 400 | --- | --- |
| 4 | --- | 440 | --- | 440 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 400 | --- | 405 | --- | 440 | 400 | --- | 410 | 380 | --- | --- | 360 |
| 6 | --- | --- | --- | --- | --- | --- | 320 | --- | --- | --- | 360 | --- |
| 7 | --- | --- | --- | 440 | --- | --- | --- | --- | --- | 382 | --- | --- |
| 8 | 360 | 440 | 440 | --- | --- | --- | --- | 395 | --- | --- | --- | 360 |
| 9 | --- | --- | --- | --- | 450 | 400 | 320 | --- | 400 | --- | 370 | --- |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 390 | --- | --- |
| 11 | --- | --- | --- | 440 | --- | --- | 340 | --- | --- | --- | 375 | 350 |
| 12 | 340 | 400 | 440 | --- | 425 | 380 | 340 | 385 | 410 | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | 335 | --- | --- | --- | --- | --- |
| 14 | 350 | --- | --- | 425 | --- | --- | --- | --- | --- | 408 | 370 | --- |
| 15 | --- | 405 | --- | --- | --- | 375 | 330 | 385 | --- | --- | --- | --- |
| 16 | --- | --- | 440 | --- | 420 | --- | --- | --- | 420 | --- | --- | 340 |
| 17 | --- | --- | --- | --- | --- | --- | 340 | --- | --- | 418 | --- | --- |
| 18 | 360 | 420 | --- | 425 | --- | --- | --- | --- | --- | --- | --- | 320 |
| 19 | --- | --- | 430 | --- | 420 | 360 | 340 | 390 | 420 | --- | 360 | --- |
| 20 | 400 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 420 | 425 | --- | 420 | --- | --- | 370 | --- | --- | 400 | --- | --- |
| 22 | 420 | --- | --- | --- | --- | 420 | --- | 380 | --- | --- | 350 | 310 |
| 23 | --- | --- | 460 | --- | 420 | --- | --- | --- | 420 | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | 380 | --- | --- | 390 | --- | 300 |
| 25 | --- | 430 | --- | 420 | --- | --- | --- | --- | 410 | --- | 355 | 300 |
| 26 | --- | --- | --- | --- | 400 | 440 | --- | 350 | --- | --- | --- | 300 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | 410 | --- | 350 | --- |
| 28 | 440 | 420 | 460 | 420 | --- | --- | 400 | 340 | --- | 372 | --- | 280 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 290 |
| 30 | --- | --- | --- | --- | --- | 430 | 400 | --- | 390 | --- | --- | 295 |
| 31 | --- | --- | 440 | --- | --- | --- | --- | --- | --- | 375 | --- | --- |

### TEMPERATURE, WATER (DEG. C.), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
RANDOM VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14.0 | 8.0 | .0 | --- | .0 | --- | --- | --- | --- | --- | --- | --- |
| 2 | --- | --- | --- | --- | --- | 2.0 | --- | --- | --- | --- | --- | 20.0 |
| 3 | --- | --- | --- | --- | --- | --- | 5.0 | --- | 20.0 | 26.0 | --- | --- |
| 4 | --- | 8.0 | --- | .0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 13.0 | --- | .0 | --- | --- | 2.0 | --- | 15.0 | 22.0 | --- | --- | 20.0 |
| 6 | --- | --- | --- | --- | --- | --- | 10.0 | --- | --- | --- | 26.0 | --- |
| 7 | --- | --- | --- | .0 | --- | --- | --- | --- | --- | 27.0 | --- | --- |
| 8 | 16.0 | 7.0 | .0 | --- | --- | --- | --- | 16.0 | --- | --- | --- | 16.0 |
| 9 | --- | --- | --- | --- | --- | 2.0 | 11.0 | --- | 20.0 | --- | 26.0 | --- |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 27.0 | --- | --- |
| 11 | --- | --- | --- | .0 | --- | --- | 12.0 | --- | --- | --- | 26.0 | 22.0 |
| 12 | 12.0 | 8.0 | .0 | --- | .0 | 2.0 | 11.0 | 18.0 | 22.0 | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | 9.0 | --- | --- | --- | --- | --- |
| 14 | 11.0 | --- | --- | 1.0 | --- | --- | --- | --- | --- | 27.0 | 26.0 | --- |
| 15 | --- | 6.0 | --- | --- | --- | 2.0 | 9.0 | 18.0 | --- | --- | --- | --- |
| 16 | --- | --- | .0 | --- | .0 | --- | --- | --- | 24.0 | --- | --- | 20.0 |
| 17 | --- | --- | --- | --- | --- | --- | 11.0 | --- | --- | 28.0 | --- | --- |
| 18 | 12.0 | 6.0 | --- | 1.0 | --- | --- | --- | --- | --- | --- | --- | 16.0 |
| 19 | --- | --- | .0 | --- | .0 | 4.0 | 11.0 | 16.0 | 26.0 | --- | 24.0 | --- |
| 20 | 11.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 12.0 | 6.0 | --- | 1.0 | --- | --- | 9.0 | --- | --- | 29.0 | --- | --- |
| 22 | 12.0 | --- | --- | --- | --- | 5.0 | --- | 18.0 | --- | --- | 24.0 | 18.0 |
| 23 | --- | --- | .0 | --- | .0 | --- | --- | --- | 26.0 | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | 12.0 | --- | --- | 27.0 | --- | 18.0 |
| 25 | --- | .0 | --- | .0 | --- | --- | --- | --- | 24.0 | --- | 24.0 | 18.0 |
| 26 | --- | --- | --- | --- | .0 | 6.0 | --- | 18.0 | --- | --- | --- | 18.0 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | 26.0 | --- | 20.0 | --- |
| 28 | 10.0 | .0 | .0 | .0 | --- | --- | 15.0 | 18.0 | --- | 28.0 | --- | 15.0 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 18.0 |
| 30 | --- | --- | --- | --- | --- | 9.0 | 12.0 | --- | 24.0 | --- | --- | 18.0 |
| 31 | --- | --- | .0 | --- | --- | --- | --- | --- | --- | 26.0 | --- | --- |

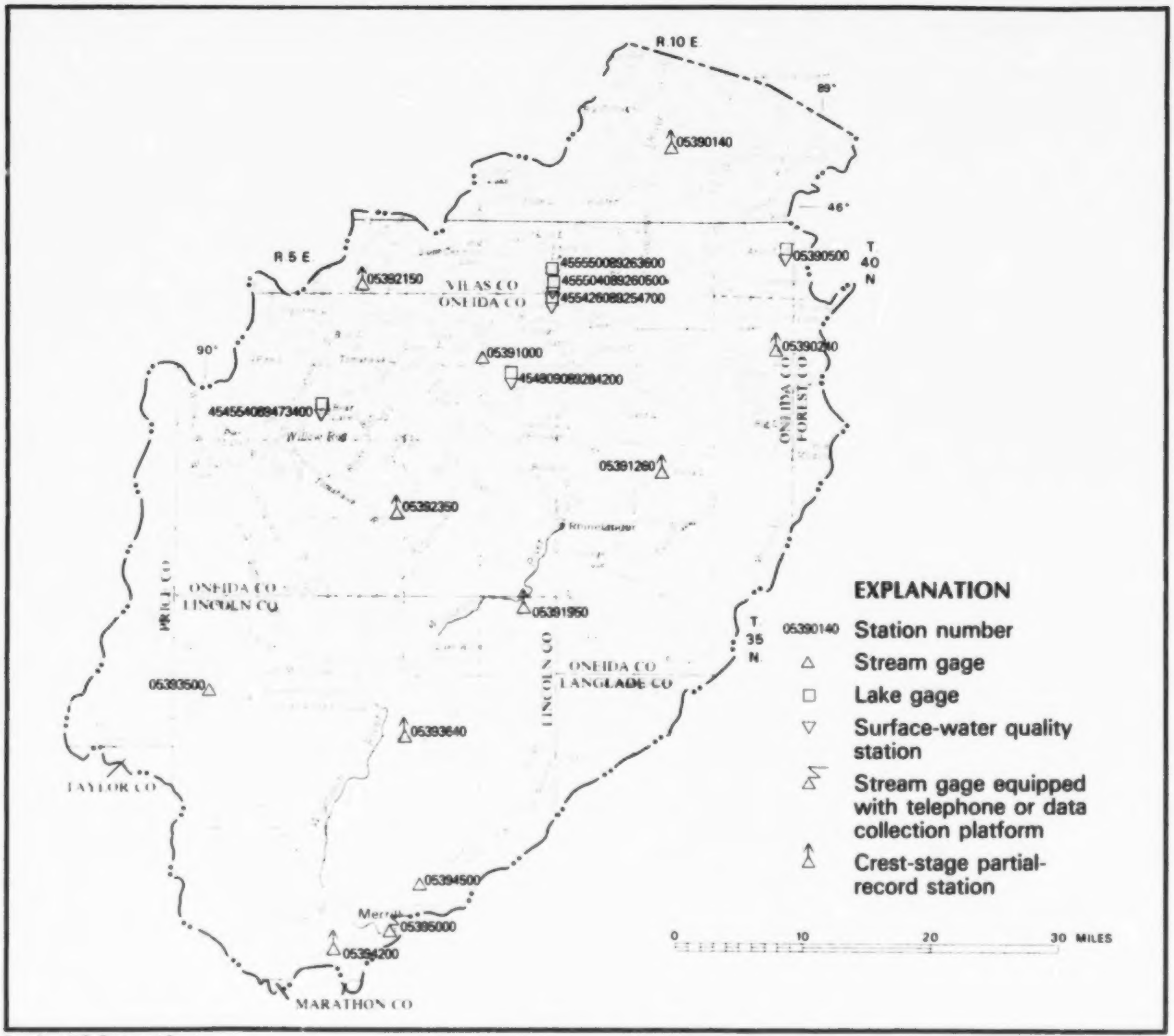
## 05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

### SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | OCTOBER |  | NOVEMBER |  | DECEMBER |  | JANUARY |  | FEBRUARY |  | MARCH |  |
| 1 | 22 | 4060 | 22 | 3270 | 5 | 521 | 4 | 496 | 5 | 475 | 8 | 814 |
| 2 | 21 | 4010 | 20 | 2950 | 5 | 540 | 4 | 497 | 5 | 487 | 3 | 318 |
| 3 | 20 | 3770 | 24 | 3570 | 4 | 432 | 4 | 500 | 4 | 415 | 3 | 318 |
| 4 | 20 | 3750 | 33 | 4910 | 4 | 461 | 4 | 504 | 4 | 444 | 2 | 187 |
| 5 | 20 | 3820 | 42 | 6090 | 4 | 545 | 4 | 486 | 4 | 480 | 1 | 112 |
| 6 | 25 | 4910 | 50 | 7090 | 4 | 567 | 5 | 583 | 4 | 497 | 1 | 114 |
| 7 | 34 | 6970 | 77 | 11100 | 4 | 564 | 5 | 610 | 5 | 626 | 1 | 108 |
| 8 | 45 | 9710 | 190 | 28300 | 5 | 691 | 5 | 598 | 5 | 629 | 1 | 100 |
| 9 | 55 | 12400 | 204 | 34500 | 5 | 701 | 5 | 613 | 5 | 622 | 1 | 105 |
| 10 | 53 | 12500 | 135 | 23300 | 4 | 580 | 5 | 579 | 4 | 484 | 2 | 216 |
| 11 | 39 | 9710 | 81 | 13600 | 4 | 607 | 5 | 558 | 3 | 356 | 4 | 442 |
| 12 | 17 | 4490 | 56 | 8570 | 4 | 620 | 5 | 551 | 2 | 225 | 7 | 803 |
| 13 | 11 | 3000 | 42 | 5560 | 4 | 620 | 5 | 560 | 1 | 103 | 7 | 852 |
| 14 | 8 | 2220 | 28 | 3520 | 4 | 618 | 5 | 574 | 1 | 98 | 5 | 648 |
| 15 | 13 | 3580 | 16 | 1920 | 4 | 617 | 5 | 591 | 1 | 96 | 12 | 1660 |
| 16 | 13 | 3490 | 14 | 1660 | 5 | 749 | 5 | 601 | 1 | 93 | 174 | 24500 |
| 17 | 13 | 3390 | 18 | 2110 | 4 | 571 | 5 | 612 | 1 | 92 | 480 | 63900 |
| 18 | 12 | 3070 | 20 | 2310 | 5 | 688 | 4 | 498 | 6 | 559 | 1020 | 134000 |
| 19 | 15 | 3790 | 22 | 2530 | 5 | 655 | 4 | 499 | 18 | 1730 | 2350 | 363000 |
| 20 | 18 | 4450 | 24 | 2790 | 4 | 488 | 3 | 375 | 18 | 1840 | 1460 | 254000 |
| 21 | 23 | 5540 | 26 | 3080 | 4 | 471 | 3 | 375 | 15 | 1560 | 490 | 91600 |
| 22 | 33 | 7650 | 29 | 3550 | 4 | 481 | 3 | 374 | 8 | 836 | 94 | 17900 |
| 23 | 51 | 11400 | 30 | 3730 | 4 | 509 | 3 | 368 | 1 | 105 | 56 | 10700 |
| 24 | 38 | 8260 | 22 | 2280 | 4 | 511 | 4 | 487 | 3 | 318 | 53 | 10300 |
| 25 | 28 | 5830 | 13 | 1330 | 4 | 514 | 5 | 607 | 5 | 485 | 48 | 9930 |
| 26 | 27 | 5420 | 12 | 1180 | 4 | 518 | 5 | 602 | 7 | 750 | 46 | 10200 |
| 27 | 26 | 5010 | 11 | 983 | 4 | 516 | 5 | 562 | 8 | 864 | 43 | 9910 |
| 28 | 25 | 4580 | 11 | 829 | 4 | 512 | 5 | 505 | 10 | 1070 | 40 | 9440 |
| 29 | 24 | 3820 | 9 | 603 | 4 | 507 | 5 | 513 | --- | --- | 38 | 9360 |
| 30 | 24 | 3810 | 7 | 548 | 4 | 501 | 5 | 486 | --- | --- | 35 | 9290 |
| 31 | 23 | 3470 | --- | --- | 4 | 497 | 5 | 471 | --- | --- | 35 | 9640 |
| TOTAL | --- | 171880 | --- | 187763 | --- | 17372 | --- | 16235 | --- | 16339 | --- | 1044467 |

| DAY | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | APRIL |  | MAY |  | JUNE |  | JULY |  | AUGUST |  | SEPTEMBER |  |
| 1 | 38 | 10700 | 20 | 5670 | 26 | 6390 | 27 | 5310 | 62 | 11300 | 41 | 5170 |
| 2 | 40 | 11300 | 17 | 4770 | 26 | 6130 | 26 | 5290 | 65 | 12100 | 32 | 3900 |
| 3 | 52 | 15400 | 14 | 4010 | 26 | 5830 | 27 | 5550 | 60 | 11100 | 32 | 3720 |
| 4 | 95 | 29800 | 15 | 4410 | 30 | 6330 | 27 | 5550 | 56 | 10200 | 45 | 5130 |
| 5 | 162 | 55100 | 19 | 5800 | 38 | 7310 | 26 | 5250 | 49 | 8450 | 39 | 4370 |
| 6 | 97 | 35900 | 23 | 7330 | 51 | 9050 | 26 | 5150 | 38 | 6110 | 35 | 3840 |
| 7 | 49 | 19600 | 20 | 6530 | 33 | 5790 | 26 | 5010 | 33 | 4830 | 33 | 3600 |
| 8 | 33 | 14000 | 17 | 5690 | 23 | 3960 | 28 | 5080 | 29 | 4090 | 30 | 3290 |
| 9 | 26 | 11400 | 17 | 5740 | 17 | 2770 | 30 | 5260 | 25 | 3320 | 28 | 3080 |
| 10 | 26 | 11700 | 16 | 5400 | 16 | 2430 | 31 | 5260 | 27 | 3400 | 25 | 2860 |
| 11 | 27 | 12200 | 15 | 5060 | 15 | 2170 | 30 | 4910 | 37 | 4650 | 37 | 4650 |
| 12 | 26 | 11100 | 15 | 5020 | 14 | 1940 | 28 | 4350 | 35 | 4550 | 72 | 9720 |
| 13 | 14 | 6050 | 17 | 5600 | 13 | 1710 | 25 | 3670 | 30 | 4060 | 84 | 12500 |
| 14 | 19 | 8000 | 24 | 7840 | 15 | 1970 | 22 | 3040 | 24 | 3300 | 66 | 10600 |
| 15 | 36 | 14700 | 23 | 7330 | 26 | 3470 | 22 | 2920 | 22 | 3080 | 36 | 6230 |
| 16 | 35 | 13700 | 20 | 6530 | 35 | 4760 | 23 | 3110 | 22 | 3110 | 22 | 4050 |
| 17 | 19 | 7180 | 22 | 7310 | 37 | 5040 | 29 | 3950 | 24 | 3390 | 18 | 3450 |
| 18 | 17 | 6240 | 29 | 9710 | 39 | 5320 | 30 | 3610 | 31 | 4420 | 18 | 3510 |
| 19 | 20 | 7180 | 34 | 11600 | 39 | 5290 | 29 | 4100 | 70 | 10200 | 17 | 3300 |
| 20 | 22 | 7660 | 40 | 13900 | 36 | 4810 | 27 | 3950 | 96 | 14200 | 16 | 3080 |
| 21 | 20 | 6750 | 37 | 13000 | 32 | 4210 | 25 | 3790 | 88 | 13200 | 33 | 6420 |
| 22 | 22 | 7250 | 22 | 7660 | 35 | 4520 | 26 | 4010 | 76 | 11500 | 102 | 20700 |
| 23 | 25 | 8030 | 20 | 6910 | 45 | 6250 | 27 | 4320 | 66 | 9800 | 85 | 18700 |
| 24 | 30 | 9480 | 20 | 6750 | 53 | 7540 | 27 | 4550 | 57 | 7860 | 39 | 9580 |
| 25 | 31 | 9540 | 18 | 5930 | 63 | 9360 | 29 | 5130 | 72 | 9210 | 42 | 11700 |
| 26 | 30 | 9070 | 19 | 6050 | 59 | 9180 | 30 | 5280 | 64 | 8160 | 37 | 12000 |
| 27 | 26 | 7650 | 23 | 7080 | 38 | 6020 | 30 | 5190 | 40 | 5840 | 40 | 14700 |
| 28 | 22 | 6420 | 27 | 8020 | 34 | 5970 | 31 | 5370 | 62 | 9460 | 42 | 16400 |
| 29 | 21 | 6010 | 26 | 7300 | 30 | 5510 | 28 | 4810 | 84 | 12500 | 48 | 19800 |
| 30 | 23 | 6520 | 26 | 6930 | 27 | 5080 | 26 | 4490 | 76 | 10500 | 37 | 15700 |
| 31 | --- | --- | 26 | 6630 | --- | --- | 34 | 6010 | 56 | 7500 | --- | --- |
| TOTAL | --- | 385630 | --- | 217510 | --- | 156110 | --- | 143270 | --- | 235390 | --- | 245750 |

TOTAL LOAD FOR YEAR: 2837716 TONS.



Base from U.S. Geological Survey
State base map, 1968

UPPER WISCONSIN RIVER BASIN

BEST COPY AVAILABLE

## 05390500 ANVIL LAKE NEAR EAGLE RIVER, WI

### LAKE-STAGE RECORDS

**LOCATION.**--Lat 45°57'07", long 89°03'26", in NW 1/4 NE 1/4 sec.13, T.40 N., R.11 E., Vilas County, Hydrologic Unit 07070001, 9.6 mi east of Eagle River.

**DRAINAGE AREA.**--4.11 mi$^2$. Area of Anvil Lake, 380 acres.

**PERIOD OF RECORD.**--August 1936 to September 1981 (fragmentary), June 1985 to current year.

**REVISED RECORD.**--WDR WI-80-1: Drainage area.

**GAGE.**--Nonrecording gage. Datum of gage is 90.00 ft above datum assumed by Wisconsin Department of Natural Resources: gage readings have been reduced to elevations above this datum. Prior to Aug. 13, 1950, staff gage 0.3 mi southeast at same datum; Aug. 14 to Sept. 30, 1981, staff gage 0.2 mi east at same datum. Gage read by James Sachse.

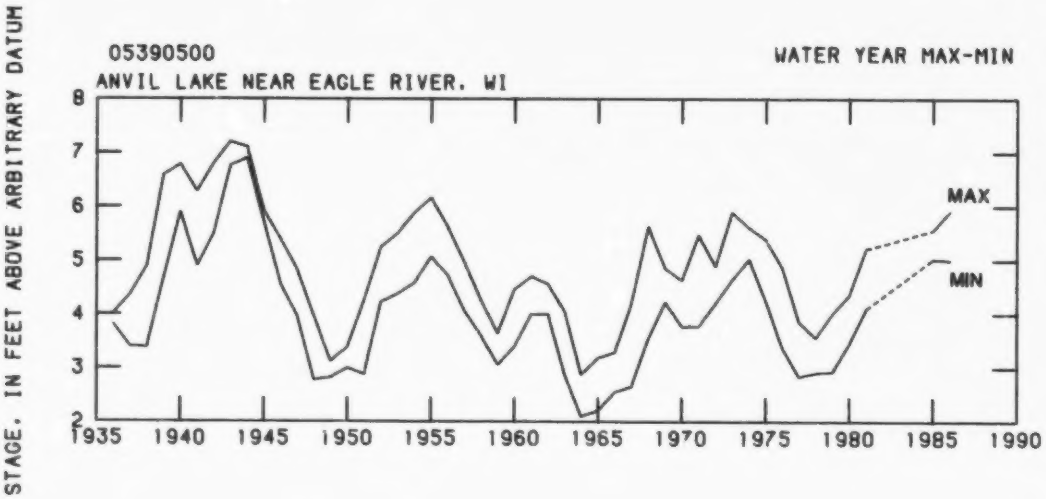
**REMARKS.**--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum gage height observed, 7.20 ft, May 3, 7, 17, 21, 24, 28, June 20 and 24, 1943; minimum observed, 2.10 ft July 31, 1964.

**EXTREMES FOR CURRENT YEAR.**--Maximum gage height observed, 5.91 ft, Apr. 28; minimum observed, 5.00 ft, Sept. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 5 | 5.33 | APR. 20 | 5.87 | JUNE 8 | 5.42 | JULY 16 | 5.35 | AUG. 9 | 5.21 | SEPT. 1 | 5.00 |
| OCT. 10 | 5.32 | APR. 28 | 5.91 | JUNE 16 | 5.35 | JULY 22 | 5.37 | AUG. 15 | 5.14 | SEPT. 7 | 5.08 |
| OCT. 19 | 5.32 | MAY 10 | 5.83 | JUNE 24 | 5.31 | JULY 28 | 5.31 | AUG. 17 | 5.14 | SEPT. 18 | 5.17 |
| OCT. 26 | 5.29 | MAY 22 | 5.62 | JULY 6 | 5.26 | AUG. 3 | 5.23 | AUG. 24 | 5.16 | SEPT. 24 | 5.20 |
| NOV. 9 | 5.41 | MAY 31 | 5.57 | JULY 13 | 5.37 | | | | | | |



### WATER-QUALITY RECORDS

**LOCATION.**--Lat 45°56'39", long 89°03'44", in NE 1/4 SW 1/4 sec.13, T.40 N., R.11 E., Vilas County, Hydrologic Unit 07070001, near center of lake, and 9.2 mi east of Eagle River.

**PERIOD OF RECORD.**--June 1985 to current year.

**REMARKS.**--Secchi disc readings made by James Sachse.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 31 | 7.0 | JUNE 24 | 5.0 | AUG. 3 | 3.0 | AUG. 17 | 2.8 | SEPT. 1 | 2.9 | SEPT. 24 | 4.7 |
| JUNE 8 | 5.5 | JULY 22 | 3.7 | AUG. 9 | 2.8 | AUG. 24 | 3.1 | SEPT. 7 | 2.9 | | |

BEST COPY AVAILABLE

## 455426089254700 ALMA LAKE NEAR ST. GERMAIN, WI

### LAKE-STAGE RECORDS

**LOCATION.**--Lat 45°54'26", long 89°25'47", in NE 1/4 sec.36, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 3 mi east of St. Germain.

**PERIOD OF RECORD.**--October 1984 to current year.

**GAGE.**--Staff gage read by John P. Seibel. Elevation of gage is 1,617 ft, from topographic map.

**REMARKS.**--Lake ice-covered Nov. 18 to Apr. 10.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum gage height observed, 12.35 ft, Apr. 11, 12, 1986; minimum observed, 11.45 ft, Sept. 2, 1985.

**EXTREMES FOR CURRENT YEAR.**--Maximum gage height observed, 12.35 ft, Apr. 11, 12; minimum observed, 11.55 ft, Sept. 9.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11.69 | 11.83 | | | | | --- | 12.17 | 11.87 | 11.75 | 11.79 | 11.57 |
| 2 | 11.69 | 11.85 | | | | | --- | 12.18 | 11.85 | 11.73 | 11.77 | 11.57 |
| 3 | 11.73 | 11.89 | | | | | --- | 12.19 | 11.83 | 11.73 | 11.75 | 11.55 |
| 4 | 11.77 | 11.99 | | | | | --- | 12.14 | 11.80 | 11.74 | 11.73 | 11.55 |
| 5 | 11.91 | 11.99 | | | | | --- | 12.13 | 11.78 | 11.77 | 11.77 | 11.63 |
| 6 | 11.89 | 11.99 | | | | | --- | 12.13 | 11.77 | 11.76 | 11.75 | 11.62 |
| 7 | 11.89 | 11.99 | | | | | --- | 12.11 | 11.76 | 11.75 | 11.73 | 11.60 |
| 8 | 11.91 | 11.97 | | | | | --- | 12.09 | 11.76 | 11.74 | 11.75 | 11.59 |
| 9 | 11.91 | 11.95 | | | | | --- | 12.07 | 11.75 | 11.73 | 11.77 | 11.55 |
| 10 | 11.91 | 11.95 | | | | | --- | 12.07 | 11.77 | 11.71 | 11.77 | 11.63 |
| 11 | 11.90 | 11.95 | | | | | 12.35 | 12.06 | 11.78 | 11.69 | 11.77 | 11.63 |
| 12 | 11.95 | 11.94 | | | | | 12.35 | 12.06 | 11.78 | 11.71 | 11.76 | 11.62 |
| 13 | 11.94 | 11.94 | | | | | 12.15 | 12.05 | 11.77 | 11.81 | 11.76 | 11.61 |
| 14 | 11.93 | 11.94 | | | | | 12.15 | 12.05 | 11.76 | 11.80 | 11.77 | 11.63 |
| 15 | 11.91 | 11.94 | | | | | 12.15 | 12.05 | 11.75 | 11.81 | 11.75 | 11.73 |
| 16 | 11.91 | 11.94 | | | | | 12.14 | 12.05 | 11.73 | 11.79 | 11.75 | 11.67 |
| 17 | 11.90 | 11.94 | | | | | 12.13 | 12.03 | 11.71 | 11.79 | 11.73 | 11.67 |
| 18 | 11.86 | --- | | | | | 12.14 | 12.01 | 11.69 | 11.77 | 11.71 | 11.66 |
| 19 | 11.89 | --- | | | | | 12.14 | 11.99 | 11.74 | 11.83 | 11.69 | 11.66 |
| 20 | 11.89 | --- | | | | | 12.15 | 11.97 | 11.69 | 11.82 | 11.67 | 11.67 |
| 21 | 11.88 | --- | | | | | 12.15 | 11.96 | 11.72 | 11.80 | 11.67 | 11.67 |
| 22 | 11.87 | --- | | | | | 12.13 | 11.95 | 11.72 | 11.78 | 11.68 | 11.67 |
| 23 | 11.87 | --- | | | | | 12.12 | 11.94 | 11.75 | 11.81 | 11.71 | 11.67 |
| 24 | 11.87 | --- | | | | | 12.13 | 11.93 | 11.72 | 11.79 | 11.69 | 11.67 |
| 25 | 11.86 | --- | | | | | 12.13 | 11.93 | 11.72 | 11.77 | 11.67 | 11.77 |
| 26 | 11.85 | --- | | | | | 12.18 | 11.93 | 11.72 | 11.77 | 11.67 | 11.79 |
| 27 | 11.85 | --- | | | | | 12.17 | --- | 11.82 | 11.78 | 11.65 | 11.83 |
| 28 | 11.85 | --- | | | | | 12.18 | --- | 11.81 | 11.77 | 11.65 | 11.84 |
| 29 | 11.84 | --- | | | | | 12.19 | --- | 11.79 | 11.75 | 11.63 | 11.83 |
| 30 | 11.83 | --- | | | | | 12.18 | --- | 11.77 | 11.73 | 11.61 | 11.83 |
| 31 | 11.82 | --- | | | | | --- | --- | --- | 11.73 | 11.59 | --- |
| MEAN | 11.86 | --- | | | | | --- | --- | 11.76 | 11.76 | 11.71 | 11.67 |
| MAX | 11.95 | --- | | | | | --- | --- | 11.87 | 11.83 | 11.79 | 11.84 |
| MIN | 11.69 | --- | | | | | --- | --- | 11.69 | 11.69 | 11.59 | 11.55 |

### WATER-QUALITY RECORDS

**LOCATION.**--Lat 45°54'36", long 89°25'43", in NE 1/4 sec.36, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, near center of lake and 3 mi east of St. Germain.

**PERIOD OF RECORD.**--May 1985 to current year.

**REMARKS.**--Secchi disc readings made by John P. Seibel.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 4 | 2.7 | NOV. 6 | 2.7 | MAY 12 | 4.3 | JUNE 27 | 2.4 | AUG. 1 | 2.7 | AUG. 29 | 2.4 |
| OCT. 11 | 2.7 | APR. 15 | 3.7 | MAY 23 | 4.0 | JULY 7 | 2.7 | AUG. 8 | 2.7 | SEPT. 5 | 2.4 |
| OCT. 19 | 2.7 | APR. 22 | 4.0 | JUNE 8 | 3.7 | JULY 15 | 3.0 | AUG. 15 | 2.7 | SEPT. 12 | 2.1 |
| OCT. 30 | 2.7 | APR. 30 | 4.0 | JUNE 20 | 2.7 | JULY 22 | 3.0 | AUG. 22 | 2.4 | SEPT. 19 | 2.1 |
| | | | | | | | | | | SEPT. 25 | 2.1 |

## 455504089260500 MOON LAKE NEAR ST. GERMAIN, WI

### WATER-QUALITY RECORDS

**LOCATION.**--Lat 45°55'04", long 89°26'05", in SE 1/4 SE 1/4 sec.25, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, near center of lake, and 3 mi east of St. Germain.

**PERIOD OF RECORD.**--May 1985 to current year.

**REMARKS.**--Secchi disc readings made by John P. Seibel.

### SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 4 | 3.0 | NOV. 6 | 3.0 | MAY 12 | 5.2 | JUNE 27 | 3.4 | AUG. 1 | 4.3 | AUG. 29 | 3.4 |
| OCT. 11 | 3.0 | APR. 15 | 4.3 | MAY 23 | 4.9 | JULY 7 | 4.6 | AUG. 8 | 4.3 | SEPT. 5 | 3.4 |
| OCT. 19 | 3.0 | APR. 22 | 4.6 | JUNE 8 | 4.0 | JULY 15 | 4.6 | AUG. 15 | 4.0 | SEPT. 12 | 3.0 |
| OCT. 30 | 3.0 | APR. 30 | 4.9 | JUNE 20 | 4.6 | JULY 22 | 4.6 | AUG. 22 | 3.7 | SEPT. 19 | 3.0 |
|  |  |  |  |  |  |  |  |  |  | SEPT. 25 | 3.0 |

## 455550089263600 LITTLE ST. GERMAIN LAKE NEAR ST. GERMAIN, WI

LOCATION.--Lat 45°55'50", long 89°26'36", in NW 1/4 SW 1/4 sec.24, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 3.1 mi northeast of St. Germain.

PERIOD OF RECORD.--October 1985 to September 1986.

GAGE.--Staff gage read by Boyd Best. Elevation of gage is 1614 ft, from topographic map.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.83 ft, Sept. 22; minimum observed, 10.52 ft, Mar. 27 and 28.

### GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11.69 | 11.61 | | | | --- | 10.54 | 11.63 | 11.59 | 11.69 | 11.69 | 11.61 |
| 2 | 11.69 | 11.67 | | | | --- | 10.53 | 11.63 | 11.59 | 11.69 | 11.69 | 11.61 |
| 3 | 11.69 | 11.67 | | | | --- | 10.53 | 11.61 | 11.59 | 11.65 | 11.69 | 11.59 |
| 4 | 11.83 | 11.67 | | | | --- | 10.65 | 11.61 | 11.59 | 11.65 | 11.69 | 11.63 |
| 5 | 11.85 | 11.65 | | | | --- | 10.73 | 11.61 | 11.59 | 11.65 | 11.69 | 11.65 |
| 6 | 11.79 | 11.65 | | | | --- | 10.85 | 11.61 | 11.59 | 11.65 | 11.69 | 11.65 |
| 7 | 11.75 | 11.63 | | | | --- | 10.91 | 11.61 | 11.59 | 11.65 | 11.69 | 11.65 |
| 8 | 11.71 | 11.63 | | | | --- | 10.97 | 11.61 | 11.59 | 11.65 | 11.69 | 11.65 |
| 9 | 11.69 | 11.63 | | | | --- | 11.01 | 11.61 | 11.59 | 11.65 | 11.71 | 11.61 |
| 10 | 11.67 | 11.63 | | | | --- | 11.05 | 11.61 | 11.59 | 11.65 | 11.71 | 11.65 |
| 11 | 11.67 | 11.63 | | | | --- | 11.08 | 11.61 | 11.59 | 11.67 | 11.71 | 11.65 |
| 12 | 11.69 | 11.63 | | | | --- | 11.15 | 11.61 | 11.59 | 11.69 | 11.69 | 11.63 |
| 13 | 11.69 | 11.63 | | | | --- | 11.18 | 11.61 | 11.59 | 11.69 | 11.69 | 11.63 |
| 14 | 11.67 | 11.63 | | | | --- | 11.18 | 11.61 | 11.59 | 11.69 | 11.69 | 11.63 |
| 15 | 11.65 | 11.63 | | | | --- | 11.23 | 11.61 | 11.59 | 11.69 | 11.69 | 11.65 |
| 16 | 11.65 | 11.61 | | | | --- | 11.25 | 11.61 | 11.55 | 11.67 | 11.69 | 11.65 |
| 17 | 11.65 | 11.59 | | | | --- | 11.31 | 11.61 | 11.55 | 11.67 | 11.69 | 11.63 |
| 18 | 11.67 | 11.63 | | | | --- | 11.31 | 11.61 | 11.53 | 11.67 | 11.69 | 11.63 |
| 19 | 11.65 | 11.61 | | | | --- | 11.38 | 11.61 | 11.57 | 11.69 | 11.69 | 11.65 |
| 20 | 11.65 | 11.61 | | | | --- | 11.41 | 11.61 | 11.55 | 11.69 | 11.69 | 11.73 |
| 21 | 11.65 | 11.59 | | | | --- | 11.41 | 11.59 | 11.59 | 11.69 | 11.69 | 11.79 |
| 22 | 11.65 | 11.59 | | | | --- | 11.43 | 11.59 | 11.59 | 11.69 | 11.67 | 11.83 |
| 23 | 11.65 | 11.59 | | | | --- | 11.41 | 11.59 | 11.61 | 11.69 | 11.67 | 11.81 |
| 24 | 11.63 | 11.59 | | | | --- | 11.41 | 11.59 | 11.59 | 11.69 | 11.65 | 11.81 |
| 25 | 11.63 | 11.59 | | | | --- | 11.43 | 11.59 | 11.59 | 11.69 | 11.63 | 11.81 |
| 26 | 11.63 | 11.59 | | | | --- | 11.49 | 11.59 | 11.63 | 11.69 | 11.63 | 11.77 |
| 27 | 11.63 | 11.61 | | | | 10.52 | 11.55 | 11.59 | 11.69 | 11.69 | 11.63 | 11.77 |
| 28 | 11.61 | 11.61 | | | | 10.52 | 11.55 | 11.59 | 11.69 | 11.69 | 11.63 | 11.77 |
| 29 | 11.61 | --- | | | | 10.53 | 11.61 | 11.59 | 11.69 | 11.69 | 11.63 | 11.75 |
| 30 | 11.61 | 11.61 | | | | 10.53 | 11.63 | 11.59 | 11.69 | 11.69 | 11.61 | 11.73 |
| 31 | 11.61 | --- | | | | 10.54 | --- | 11.59 | --- | 11.69 | 11.61 | --- |
| MEAN | 11.67 | --- | | | | --- | 11.17 | 11.60 | 11.60 | 11.68 | 11.67 | 11.69 |
| MAX | 11.85 | --- | | | | --- | 11.63 | 11.63 | 11.69 | 11.69 | 11.71 | 11.83 |
| MIN | 11.61 | --- | | | | --- | 10.53 | 11.59 | 11.53 | 11.65 | 11.61 | 11.59 |

## 454809089284200 MUSKELLUNGE LAKE NEAR LAKE TOMAHAWK, WI

### LAKE-STAGE RECORDS

**LOCATION.**--Lat 45°48'09", long 89°28'42", in NE 1/4 sec.10, T.38 N., R.8 E., Oneida County, Hydrologic Unit 07070001, 5.7 mi east of Lake Tomahawk.

**PERIOD OF RECORD.**-- October 1984 to current year.

**GAGE.**--Staff gage read by Kenard Kenworthy. Elevation of gage is 1622 ft, from topographic map.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum gage height observed, 9.68 ft, Sept. 27, 1985; minimum observed, 8.38 ft, Aug. 6, 1985.

**EXTREMES FOR CURRENT YEAR.**--Maximum gage height observed, 8.83 ft, June 21 and July 22; minimum observed, 8.50 ft, June 13.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUNE 13 | 8.50 | JUNE 29 | 8.78 | JULY 14 | 8.65 | JULY 28 | 8.69 | AUG. 12 | 8.59 | AUG. 24 | 8.69 |
| JUNE 21 | 8.83 | JULY 7 | 8.69 | JULY 22 | 8.83 | AUG. 6 | 8.60 | AUG. 18 | 8.59 | | |

### WATER-QUALITY RECORDS

**LOCATION.**--Lat 45°47'55", long 89°28'48", in NW 1/4 sec.10, T.38 N., R.8 E., Oneida County, Hydrologic Unit 07070001, near center of lake, and 5.7 mi east of Lake Tomahawk.

**PERIOD OF RECORD.**--May 1985 to current year.

**REMARKS.**--Secchi disc readings made by Kenard Kenworthy.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 31 | 3.3 | JUNE 21 | 2.8 | JULY 7 | 2.9 | JULY 22 | 2.6 | AUG. 6 | 1.2 | AUG. 18 | 1.0 |
| JUNE 13 | 2.8 | JUNE 29 | 2.7 | JULY 14 | 2.7 | JULY 28 | 2.1 | AUG. 12 | 1.0 | AUG. 24 | 1.1 |

## 05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WI

**LOCATION.**--Lat 45°49'50", long 89°33'08", in NE 1/4 NE 1/4 sec.36, T.39 N., R.7 E., Oneida County, Hydrologic Unit 07070001, on right bank 500 ft downstream from Gilmore Creek, 0.4 mi downstream from Rainbow Lake, and 2.3 mi northeast of Lake Tomahawk.

**DRAINAGE AREA.**--757 $mi^2$.

**PERIOD OF RECORD.**--July 1936 to current year. Prior to October 1955, published as "at Rainbow Reservoir, near Lake Tomahawk."

**REVISED RECORDS.**--WSP 895: 1937(M). WSP 1508: 1944. WDR WI-83-1: Drainage area. WDR WI-80-1: Datum.

**GAGE.**--Water-stage recorder. Datum of gage is 1,569.05 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).

**REMARKS.**--No estimated daily discharges. Record good. Flow regulated by Rainbow Lake and 12 smaller reservoirs upstream from station.

**AVERAGE DISCHARGE.**--50 years, 706 $ft^3/s$.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 3,570 $ft^3/s$ Sept. 5, 1941, gage height, 7.59 ft; minimum, 17 $ft^3/s$ Oct. 10-12, 1940; minimum daily, 35 $ft^3/s$ Apr. 6, 1955.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,040 $ft^3/s$ Oct. 8, gage height, 5.14 ft; minimum daily, 228 $ft^3/s$ Apr. 4.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 2-7.)

| | | | |
|---|---|---|---|
| 0.7 | 224 | 3.0 | 923 |
| 1.3 | 340 | 4.0 | 1,400 |
| 2.0 | 545 | 6.0 | 2,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 543 | 929 | 1090 | 1070 | 1050 | 908 | 399 | 1070 | 575 | 507 | 421 | 600 |
| 2 | 596 | 1500 | 1090 | 1070 | 1040 | 896 | 233 | 1050 | 517 | 515 | 426 | 600 |
| 3 | 763 | 1590 | 1090 | 1070 | 1040 | 884 | 229 | 905 | 476 | 493 | 435 | 608 |
| 4 | 1220 | 1630 | 1090 | 1070 | 1030 | 875 | 228 | 826 | 471 | 450 | 462 | 550 |
| 5 | 1770 | 1650 | 1090 | 1070 | 1030 | 873 | 229 | 827 | 471 | 363 | 494 | 497 |
| 6 | 1760 | 1720 | 1090 | 1060 | 1030 | 861 | 229 | 826 | 480 | 305 | 491 | 537 |
| 7 | 1820 | 1660 | 1090 | 1060 | 1020 | 850 | 231 | 826 | 490 | 364 | 485 | 595 |
| 8 | 1960 | 1570 | 1090 | 1050 | 1020 | 840 | 280 | 798 | 485 | 445 | 484 | 609 |
| 9 | 2020 | 1530 | 1090 | 1050 | 1010 | 828 | 315 | 862 | 482 | 467 | 489 | 609 |
| 10 | 2010 | 1570 | 1120 | 1040 | 1010 | 816 | 310 | 835 | 476 | 439 | 490 | 491 |
| 11 | 2010 | 1390 | 1140 | 1050 | 1000 | 828 | 311 | 780 | 475 | 421 | 487 | 346 |
| 12 | 2010 | 1050 | 1130 | 1040 | 997 | 854 | 308 | 781 | 431 | 433 | 490 | 406 |
| 13 | 1820 | 940 | 1140 | 1040 | 992 | 868 | 350 | 779 | 384 | 380 | 492 | 553 |
| 14 | 1620 | 924 | 1140 | 1040 | 983 | 885 | 391 | 775 | 376 | 349 | 488 | 600 |
| 15 | 1500 | 907 | 1130 | 1040 | 978 | 885 | 405 | 720 | 402 | 382 | 490 | 480 |
| 16 | 1370 | 921 | 1130 | 1040 | 969 | 886 | 610 | 686 | 420 | 371 | 495 | 460 |
| 17 | 1240 | 929 | 1110 | 1030 | 998 | 892 | 751 | 659 | 427 | 350 | 487 | 489 |
| 18 | 1200 | 1050 | 1100 | 1020 | 1020 | 905 | 734 | 635 | 514 | 345 | 516 | 503 |
| 19 | 1280 | 1150 | 1100 | 1020 | 1010 | 903 | 690 | 630 | 486 | 340 | 537 | 498 |
| 20 | 1320 | 1140 | 1090 | 1010 | 1000 | 916 | 667 | 625 | 457 | 328 | 536 | 498 |
| 21 | 1250 | 1110 | 1090 | 1050 | 993 | 902 | 658 | 630 | 507 | 311 | 531 | 503 |
| 22 | 1030 | 1080 | 1090 | 1080 | 986 | 887 | 686 | 630 | 503 | 310 | 562 | 616 |
| 23 | 899 | 1050 | 1090 | 1080 | 978 | 880 | 694 | 634 | 503 | 401 | 579 | 723 |
| 24 | 889 | 1040 | 1070 | 1080 | 968 | 880 | 693 | 636 | 480 | 457 | 600 | 743 |
| 25 | 846 | 1040 | 1070 | 1080 | 957 | 868 | 687 | 638 | 434 | 417 | 611 | 733 |
| 26 | 784 | 1070 | 1080 | 1070 | 942 | 782 | 701 | 640 | 437 | 389 | 590 | 1010 |
| 27 | 757 | 1100 | 1080 | 1070 | 929 | 647 | 742 | 636 | 350 | 385 | 607 | 1290 |
| 28 | 735 | 1100 | 1080 | 1070 | 918 | 604 | 767 | 606 | 284 | 316 | 609 | 1230 |
| 29 | 713 | 1100 | 1080 | 1060 | --- | 640 | 831 | 586 | 348 | 337 | 608 | 1030 |
| 30 | 715 | 1090 | 1080 | 1060 | --- | 663 | 992 | 581 | 439 | 384 | 605 | 955 |
| 31 | 714 | --- | 1070 | 1050 | --- | 658 | --- | 581 | --- | 402 | 600 | --- |
| TOTAL | 39164 | 36530 | 34020 | 32690 | 27898 | 25864 | 15351 | 22693 | 13580 | 12156 | 16197 | 19362 |
| MEAN | 1263 | 1218 | 1097 | 1055 | 996 | 834 | 512 | 732 | 453 | 392 | 522 | 645 |
| MAX | 2020 | 1720 | 1140 | 1080 | 1050 | 916 | 992 | 1070 | 575 | 515 | 611 | 1290 |
| MIN | 543 | 907 | 1070 | 1010 | 918 | 604 | 228 | 581 | 284 | 305 | 421 | 346 |

CAL YR 1985 TOTAL 301224 MEAN 825 MAX 2020 MIN 255
WTR YR 1986 TOTAL 295505 MEAN 810 MAX 2020 MIN 228

## 454554089473400 BEAR LAKE NEAR HAZELHURST, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 45°45'54", long 89°47'34", in SW 1/4 sec. 19, T.38 N., R.6 E., Oneida County, Hydrologic Unit 07070001, 4.5 mi southwest of Hazelhurst.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Ruth Van Prooien. Elevation of gage is 1562 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.67 ft, Oct. 7 and 9, 1986; minimum observed, 7.98 ft, Aug. 7, 9, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.67 ft, Oct. 7, 9; minimum observed, 7.99 ft, June 8.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 2 | 8.53 | NOV. 12 | 8.43 | APR. 28 | 8.21 | JUNE 8 | 7.99 | AUG. 1 | 8.19 | SEPT. 13 | 8.10 |
| OCT. 7 | 8.67 | NOV. 14 | 8.41 | APR. 30 | 8.15 | JUNE 15 | 8.07 | AUG. 15 | 8.17 | SEPT. 21 | 8.17 |
| OCT. 9 | 8.67 | NOV. 19 | 8.49 | MAY 2 | 8.13 | JUNE 17 | 8.05 | AUG. 17 | 8.17 | SEPT. 26 | 8.27 |
| OCT. 16 | 8.59 | NOV. 25 | 8.49 | MAY 11 | 8.07 | JUNE 27 | 8.27 | AUG. 27 | 8.09 | SEPT. 29 | 8.31 |
| OCT. 20 | 8.54 | JAN. 31 | 8.63 | MAY 31 | 8.03 | | | | | | |

### WATER-QUALITY RECORDS

LOCATION.--Lat 45°45'56", long 89°48'04", in SE 1/4 sec. 24, T.38 N., R.5 E., Oneida County, Hydrologic Unit 07070001, near center of lake, and 4.8 mi southwest of Hazelhurst.

PERIOD OF RECORD.--April 1985 to current year.

REMARKS.--Secchi disc readings made by Dale Jalinski.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 1 | 3.4 | APR. 20 | 3.1 | MAY 30 | 4.3 | JUNE 18 | 3.2 | AUG. 3 | 2.3 | SEPT. 4 | 2.7 |
| OCT. 5 | 3.4 | APR. 26 | 2.6 | JUNE 1 | 4.3 | JUNE 29 | 3.2 | AUG. 16 | 2.4 | SEPT. 7 | 2.7 |
| OCT. 12 | 3.1 | MAY 9 | 3.1 | JUNE 7 | 3.7 | JULY 3 | 3.1 | AUG. 24 | 2.4 | SEPT. 19 | 3.1 |
| OCT. 20 | 2.7 | MAY 16 | 3.2 | JUNE 15 | 3.1 | JULY 12 | 2.6 | AUG. 29 | 2.4 | SEPT. 25 | 3.7 |
| OCT. 27 | 2.9 | MAY 23 | 3.4 | JUNE 17 | 3.2 | JULY 25 | 2.4 | SEPT. 3 | 2.7 | SEPT. 26 | 3.7 |
| NOV. 5 | 2.7 | MAY 28 | 4.3 | | | | | | | | |

## 05393500 SPIRIT RIVER AT SPIRIT FALLS, WI

**LOCATION.**--Lat 45°26'58", long 89°58'47", in NW 1/4 sec.10, T.34 N., R.4 E., Lincoln County, Hydrologic Unit 07070001, on right bank 40 ft downstream of bridge 0.2 mi south of Spirit Falls, 0.6 mi upstream from Squaw Creek, and 2.0 mi downstream from Richie Creek.

**DRAINAGE AREA.**--81.6 $mi^2$.

**PERIOD OF RECORD.**--April 1942 to current year.

**REVISED RECORDS.**--WSP 1308: 1943(M), 1948-50(M). WDR WI-77-1: Drainage area.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 1,461.63 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1982, nonrecording gage 40 ft upstream at same datum.

**REMARKS.**--Estimated daily discharges: Mar. 31, Apr. 1, and ice period listed in table below. Records good except those for estimated daily discharges, which are fair.

**AVERAGE DISCHARGE.**--44 years, 87.6 $ft^3/s$, 14.58 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 4,180 $ft^3/s$ Sept. 18, 1942, gage height, 10.00 ft, from rating curve extended above 2,500 $ft^3/s$; minimum observed, 1.0 $ft^3/s$ Aug. 11, 1964, gage height, 0.85 ft.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 800 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 5 | 1400 | 1,800 | 6.55 | Sept. 27 | 1700 | *2,970 | *7.87 |
| Apr. 1 | unknown | 2,830 | 7.73 | | | | |

Minimum discharge, 6.6 $ft^3/s$ June 18, gage height, 1.18 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 21 to Mar. 30.)

Oct. 1 to Mar. 30

| | | | |
|---|---|---|---|
| 1.6 | 22 | 2.5 | 112 |
| 1.8 | 36 | 3.0 | 200 |
| 2.1 | 64 | 4.0 | 470 |

Note.--Same as following table above 4.2 ft.

Mar. 31 to Sept. 30

| | | | |
|---|---|---|---|
| 1.1 | 4.8 | 3.0 | 215 |
| 1.2 | 7.0 | 4.0 | 480 |
| 1.4 | 14 | 5.0 | 870 |
| 1.7 | 31 | 6.0 | 1,400 |
| 2.0 | 58 | 8.0 | 3,100 |
| 2.5 | 122 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1010 | 207 | 49 | 37 | 31 | 31 | 2460 | 239 | 9.8 | 15 | 31 | 11 |
| 2 | 571 | 599 | 49 | 36 | 30 | 32 | 1570 | 169 | 9.2 | 13 | 36 | 9.9 |
| 3 | 354 | 445 | 50 | 35 | 30 | 33 | 924 | 119 | 9.8 | 11 | 30 | 10 |
| 4 | 482 | 264 | 50 | 34 | 31 | 33 | 659 | 99 | 10 | 14 | 24 | 52 |
| 5 | 1570 | 184 | 50 | 33 | 32 | 34 | 606 | 82 | 10 | 28 | 21 | 45 |
| 6 | 1170 | 150 | 49 | 32 | 31 | 33 | 707 | 67 | 9.6 | 27 | 25 | 33 |
| 7 | 608 | 135 | 47 | 31 | 31 | 32 | 565 | 55 | 10 | 22 | 22 | 24 |
| 8 | 479 | 113 | 46 | 30 | 31 | 32 | 422 | 46 | 12 | 16 | 37 | 21 |
| 9 | 452 | 97 | 47 | 32 | 31 | 33 | 333 | 40 | 9.6 | 13 | 26 | 19 |
| 10 | 350 | 98 | 48 | 33 | 30 | 34 | 244 | 40 | 9.3 | 11 | 25 | 269 |
| 11 | 260 | 88 | 48 | 34 | 30 | 35 | 184 | 34 | 11 | 11 | 30 | 610 |
| 12 | 243 | 74 | 46 | 34 | 31 | 38 | 131 | 37 | 14 | 35 | 24 | 442 |
| 13 | 286 | 68 | 45 | 33 | 31 | 40 | 110 | 36 | 13 | 51 | 19 | 240 |
| 14 | 234 | 66 | 45 | 33 | 31 | 45 | 110 | 36 | 10 | 37 | 35 | 153 |
| 15 | 180 | 61 | 46 | 32 | 30 | 50 | 217 | 33 | 10 | 36 | 62 | 262 |
| 16 | 144 | 90 | 46 | 32 | 31 | 50 | 216 | 31 | 11 | 261 | 47 | 340 |
| 17 | 121 | 82 | 45 | 33 | 31 | 56 | 167 | 30 | 7.9 | 175 | 37 | 231 |
| 18 | 107 | 69 | 44 | 33 | 32 | 64 | 133 | 27 | 6.9 | 101 | 29 | 203 |
| 19 | 96 | 107 | 42 | 33 | 32 | 76 | 118 | 24 | 35 | 192 | 24 | 167 |
| 20 | 85 | 158 | 41 | 33 | 32 | 70 | 110 | 22 | 49 | 230 | 20 | 151 |
| 21 | 77 | 130 | 42 | 32 | 31 | 68 | 104 | 20 | 36 | 129 | 18 | 158 |
| 22 | 71 | 110 | 43 | 31 | 30 | 72 | 90 | 18 | 35 | 82 | 17 | 399 |
| 23 | 70 | 96 | 44 | 30 | 30 | 78 | 79 | 17 | 28 | 57 | 20 | 456 |
| 24 | 75 | 82 | 44 | 30 | 29 | 82 | 71 | 16 | 25 | 48 | 27 | 286 |
| 25 | 68 | 72 | 43 | 30 | 30 | 90 | 66 | 15 | 20 | 88 | 19 | 246 |
| 26 | 62 | 66 | 42 | 29 | 30 | 96 | 77 | 15 | 16 | 62 | 15 | 338 |
| 27 | 57 | 62 | 41 | 28 | 30 | 150 | 90 | 14 | 33 | 55 | 15 | 2190 |
| 28 | 52 | 58 | 40 | 28 | 30 | 250 | 86 | 16 | 40 | 73 | 12 | 1700 |
| 29 | 49 | 54 | 39 | 29 | --- | 400 | 110 | 13 | 28 | 58 | 12 | 714 |
| 30 | 47 | 52 | 38 | 30 | --- | 1000 | 171 | 11 | 19 | 42 | 11 | 432 |
| | 45 | --- | 38 | 31 | --- | 1860 | --- | 10 | --- | 36 | 9.7 | --- |
| TOTAL | 9475 | 3937 | 1387 | 991 | 859 | 4997 | 10930 | 1431 | 547.1 | 2029 | 779.7 | 10211.9 |
| MEAN | 306 | 131 | 44.7 | 32.0 | 30.7 | 161 | 364 | 46.2 | 18.2 | 65.5 | 25.2 | 340 |
| MAX | 1570 | 599 | 50 | 37 | 32 | 1860 | 2460 | 239 | 49 | 261 | 62 | 2190 |
| MIN | 45 | 52 | 38 | 28 | 29 | 31 | 66 | 10 | 6.9 | 11 | 9.7 | 9.9 |
| CFSM | 3.75 | 1.61 | .55 | .39 | .38 | 1.97 | 4.46 | .57 | .22 | .80 | .31 | 4.17 |
| IN. | 4.32 | 1.79 | .63 | .45 | .39 | 2.28 | 4.98 | .65 | .25 | .92 | .36 | 4.66 |

CAL YR 1985 TOTAL 48566.9 MEAN 133 MAX 1580 MIN 7.2 CFSM 1.63 IN 22.14
WTR YR 1986 TOTAL 47574.7 MEAN 130 MAX 2460 MIN 6.9 CFSM 1.59 IN 21.69

## 05394500 PRAIRIE RIVER NEAR MERRILL, WI

LOCATION.--Lat 45°14'09", long 89°38'59", on line between secs.20 and 29, T.32 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, on left bank 40 ft upstream from bridge on County Trunk Highway C, 1.5 mi upstream from Meadow Creek, 4.5 mi northeast of Merrill, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--184 mi$^2$.

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1915-17(M), 1919-21(M), 1923-31(M), 1942-43(M), 1945(M), 1948-50(M). WDR WI-77-1: Drainage area. WDR WI-79-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 1,297.22 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1968, nonrecording gage 40 ft downstream at same datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in table below. Records good except those for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--64 years (1914-31, 1939-86), 181 ft$^3$/s, 13.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft$^3$/s Aug. 31, 1941, gage height, 9.65 ft, from flood marks, based on rating curve extended above 2,200 ft$^3$/s; minimum observed, 34 ft$^3$/s Oct. 26, 1947, gage height, 1.39 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 710 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 5 | 1900 | 1,230 | 5.30 | June 19 | 1800 | 718 | 4.22 |
| Nov. 2 | 1500 | 975 | 4.81 | July 19 | 0900 | 1,480 | 5.72 |
| Apr. 2 | 0200 | *1,850 | *6.29 | Sept. 28 | 0200 | 1,640 | 5.99 |

Minimum daily, 91 ft$^3$/s Sept. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Nov. 26 to Dec. 18, Dec. 21 to Jan. 25, Jan. 29-31, Mar. 2, 13, 18-24.)

| | | | |
|---|---|---|---|
| 2.1 | 90 | 5.0 | 1,070 |
| 2.4 | 141 | 6.0 | 1,650 |
| 3.0 | 285 | 7.0 | 2,400 |
| 4.0 | 630 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 946 | 371 | 150 | 140 | 135 | 136 | 1710 | 275 | 103 | 150 | 153 | 99 |
| 2 | 804 | 905 | 140 | 140 | 136 | 140 | 1720 | 284 | 102 | 129 | 181 | 95 |
| 3 | 593 | 888 | 140 | 140 | 138 | 130 | 1240 | 239 | 99 | 115 | 178 | 99 |
| 4 | 575 | 690 | 150 | 140 | 141 | 135 | 910 | 200 | 100 | 115 | 157 | 112 |
| 5 | 1130 | 520 | 160 | 140 | 140 | 129 | 772 | 182 | 100 | 133 | 143 | 116 |
| 6 | 1180 | 437 | 160 | 140 | 143 | 128 | 880 | 170 | 98 | 126 | 153 | 113 |
| 7 | 906 | 359 | 160 | 130 | 131 | 129 | 905 | 149 | 99 | 117 | 151 | 105 |
| 8 | 707 | 299 | 160 | 130 | 138 | 133 | 752 | 144 | 102 | 111 | 141 | 93 |
| 9 | 610 | 262 | 160 | 140 | 128 | 128 | 591 | 136 | 101 | 110 | 129 | 91 |
| 10 | 536 | 226 | 160 | 140 | 129 | 132 | 473 | 129 | 96 | 104 | 138 | 211 |
| 11 | 463 | 210 | 150 | 140 | 127 | 127 | 387 | 125 | 146 | 117 | 136 | 390 |
| 12 | 424 | 228 | 150 | 140 | 137 | 132 | 326 | 127 | 169 | 172 | 126 | 376 |
| 13 | 415 | 207 | 140 | 140 | 121 | 130 | 280 | 124 | 158 | 329 | 111 | 286 |
| 14 | 387 | 192 | 140 | 140 | 133 | 131 | 264 | 126 | 136 | 305 | 132 | 225 |
| 15 | 347 | 170 | 140 | 140 | 131 | 134 | 329 | 128 | 116 | 253 | 172 | 276 |
| 16 | 273 | 173 | 140 | 140 | 137 | 136 | 337 | 145 | 106 | 364 | 163 | 328 |
| 17 | 242 | 174 | 130 | 140 | 142 | 129 | 296 | 141 | 100 | 341 | 189 | 292 |
| 18 | 225 | 194 | 130 | 140 | 135 | 140 | 259 | 136 | 102 | 323 | 180 | 267 |
| 19 | 213 | 355 | 125 | 140 | 136 | 170 | 237 | 126 | 505 | 1350 | 158 | 220 |
| 20 | 201 | 364 | 130 | 140 | 142 | 160 | 229 | 121 | 543 | 975 | 137 | 223 |
| 21 | 189 | 320 | 130 | 140 | 122 | 150 | 217 | 118 | 358 | 610 | 120 | 239 |
| 22 | 173 | 283 | 130 | 140 | 129 | 170 | 195 | 112 | 258 | 386 | 116 | 560 |
| 23 | 191 | 236 | 140 | 130 | 136 | 180 | 181 | 113 | 183 | 276 | 136 | 624 |
| 24 | 217 | 210 | 140 | 130 | 131 | 190 | 171 | 112 | 151 | 227 | 134 | 502 |
| 25 | 222 | 198 | 140 | 130 | 134 | 204 | 166 | 114 | 128 | 290 | 118 | 516 |
| 26 | 211 | 180 | 140 | 131 | 133 | 268 | 196 | 113 | 120 | 264 | 116 | 576 |
| 27 | 187 | 160 | 140 | 128 | 135 | 325 | 240 | 115 | 346 | 215 | 115 | 1330 |
| 28 | 168 | 150 | 140 | 129 | 130 | 433 | 239 | 110 | 379 | 207 | 112 | 1520 |
| 29 | 159 | 150 | 140 | 130 | --- | 712 | 221 | 110 | 301 | 210 | 109 | 1100 |
| 30 | 155 | 160 | 140 | 130 | --- | 1120 | 230 | 106 | 211 | 178 | 106 | 734 |
| 31 | 156 | --- | 140 | 130 | --- | 1350 | --- | 102 | --- | 168 | 104 | --- |
| TOTAL | 13205 | 9271 | 4435 | 4228 | 3750 | 7811 | 14953 | 4432 | 5516 | 8765 | 4314 | 11693 |
| MEAN | 426 | 309 | 143 | 136 | 134 | 252 | 498 | 143 | 184 | 283 | 139 | 390 |
| MAX | 1180 | 905 | 160 | 140 | 143 | 1350 | 1720 | 284 | 543 | 1350 | 189 | 1520 |
| MIN | 155 | 150 | 125 | 128 | 121 | 127 | 166 | 102 | 96 | 104 | 104 | 91 |
| CFSM | 2.32 | 1.68 | .78 | .74 | .73 | 1.37 | 2.71 | .78 | 1.00 | 1.54 | .76 | 2.12 |
| IN. | 2.67 | 1.87 | .90 | .85 | .76 | 1.58 | 3.02 | .90 | 1.12 | 1.77 | .87 | 2.36 |

CAL YR 1985 TOTAL 83381 MEAN 228 MAX 1180 MIN 77 CFSM 1.24 IN 16.86
WTR YR 1986 TOTAL 92373 MEAN 253 MAX 1720 MIN 91 CFSM 1.38 IN 18.68

## 05395000 WISCONSIN RIVER AT MERRILL, WI

**LOCATION.**--Lat 45°10'41", long 89°40'52", on line between secs.12 and 13, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, on left bank 300 ft downstream from U.S. Highway 51 bridge at east end of Merrill, and 0.5 mi downstream from Prairie River.

**DRAINAGE AREA.**--2,760 mi$^2$.

**PERIOD OF RECORD.**--November 1902 to current year.

**REVISED RECORDS.**--WSP 1308: 1904-7, 1909-11, 1913. WSP 1508: 1908, 1915-16(M), 1917, 1920-21(M), 1925(M), 1930, 1935-36. WDR WI-77-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 1,228.85 ft above National Geodetic Vertical Datum of 1929. Prior to June 18, 1903, nonrecording gage at different datum. June 18, 1903, to Sept. 10, 1914, nonrecording gage at present datum.

**REMARKS.**--Estimated daily discharges: May 2-14, and ice period listed in rating table below. Records good. Flow regulated by 20 reservoirs and 9 powerplants upstream from station. Gage-height telemeter at station.

**AVERAGE DISCHARGE.**--83 years, 2,695 ft$^3$/s.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 49,400 ft$^3$/s Aug. 31, 1941, gage height, 18.26 ft from rating curve extended above 20,000 ft$^3$/s; minimum, about 90 ft$^3$/s Sept. 26, 1908, gage height, 2.45 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 21,900 ft$^3$/s Apr. 1, gage height, 12.57 ft; minimum daily, 1,150 ft$^3$/s June 3.

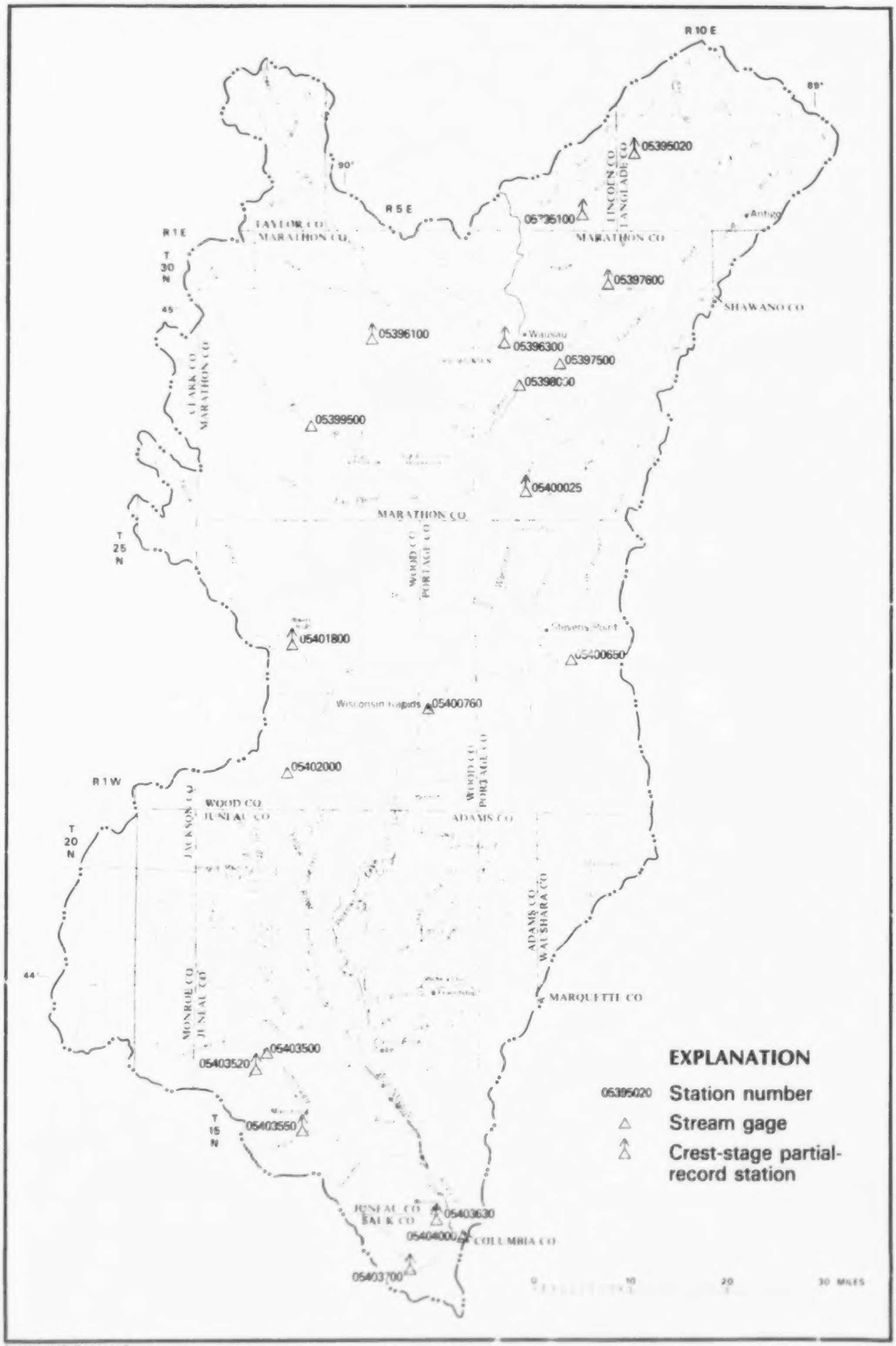
RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3 to Mar. 27.)

| | | | |
|---|---|---|---|
| 4.1 | 1,140 | 8.0 | 7,640 |
| 5.0 | 2,120 | 10.0 | 12,900 |
| 6.0 | 3,640 | 13.0 | 23,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11300 | 4930 | 3830 | 2900 | 2700 | 2900 | 20000 | 3400 | 1410 | 1570 | 2400 | 1950 |
| 2 | 10300 | 9340 | 2640 | 3000 | 2800 | 2700 | 19900 | 4000 | 1430 | 1560 | 2880 | 1840 |
| 3 | 7650 | 9850 | 3300 | 2900 | 2900 | 2700 | 14200 | 3400 | 1150 | 1730 | 2060 | 1870 |
| 4 | 9020 | 7910 | 3500 | 2900 | 2900 | 2600 | 10400 | 3000 | 1330 | 1850 | 2120 | 2080 |
| 5 | 16200 | 6190 | 3600 | 2800 | 2900 | 2900 | 8420 | 2600 | 1270 | 1810 | 2080 | 2140 |
| 6 | 16500 | 5910 | 3500 | 3100 | 2800 | 2700 | 7960 | 2600 | 1430 | 1700 | 1940 | 1770 |
| 7 | 12800 | 6240 | 3600 | 3100 | 2800 | 2700 | 7810 | 2200 | 1370 | 1600 | 2150 | 1980 |
| 8 | 11800 | 5260 | 3800 | 2800 | 2800 | 2700 | 6180 | 2000 | 1380 | 1460 | 2360 | 1960 |
| 9 | 10700 | 5390 | 4000 | 3000 | 2900 | 2700 | 5460 | 2000 | 1390 | 1660 | 2030 | 1900 |
| 10 | 10400 | 4750 | 3800 | 3000 | 2900 | 2600 | 4670 | 1900 | 1310 | 1720 | 2150 | 3090 |
| 11 | 9290 | 3800 | 3300 | 2900 | 2700 | 2600 | 4340 | 2000 | 1740 | 1780 | 2250 | 4390 |
| 12 | 9240 | 3460 | 3200 | 3000 | 2700 | 3000 | 3680 | 2100 | 1910 | 1980 | 2180 | 4040 |
| 13 | 8940 | 4340 | 3300 | 3000 | 2700 | 3100 | 3460 | 2100 | 1350 | 2240 | 1990 | 3930 |
| 14 | 7410 | 3310 | 3300 | 2900 | 2600 | 3200 | 2140 | 1900 | 1300 | 2360 | 2140 | 2770 |
| 15 | 6360 | 2810 | 3300 | 3000 | 2800 | 3200 | 4290 | 2000 | 1260 | 1830 | 2420 | 2920 |
| 16 | 5740 | 3400 | 3400 | 2900 | 2700 | 3000 | 3960 | 1970 | 1620 | 2750 | 2280 | 3840 |
| 17 | 4670 | 3450 | 3400 | 2900 | 2600 | 2900 | 3650 | 2050 | 1400 | 2390 | 2390 | 3590 |
| 18 | 3950 | 3080 | 3300 | 2700 | 2900 | 3300 | 3760 | 2050 | 1250 | 2840 | 2460 | 3410 |
| 19 | 3840 | 3740 | 3000 | 2800 | 2900 | 3300 | 3190 | 2040 | 4290 | 9280 | 1950 | 3140 |
| 20 | 3940 | 4250 | 2900 | 2900 | 2800 | 3200 | 2880 | 2040 | 3420 | 6730 | 2030 | 2560 |
| 21 | 3510 | 4400 | 2900 | 2800 | 2800 | 3000 | 3290 | 2200 | 3170 | 4680 | 2010 | 3090 |
| 22 | 3920 | 3910 | 2800 | 2900 | 2700 | 3000 | 2780 | 1630 | 2900 | 2890 | 2240 | 5650 |
| 23 | 3520 | 3910 | 3100 | 2900 | 2800 | 3200 | 2030 | 1850 | 2010 | 2460 | 2020 | 6600 |
| 24 | 3780 | 3630 | 3300 | 2800 | 2800 | 3200 | 2500 | 1630 | 1920 | 1800 | 1920 | 6120 |
| 25 | 3430 | 3420 | 3200 | 2800 | 2700 | 3200 | 2450 | 1680 | 1880 | 2610 | 2110 | 5370 |
| 26 | 2720 | 3240 | 3100 | 2800 | 2800 | 3500 | 2610 | 1590 | 1660 | 2440 | 2170 | 6670 |
| 27 | 2750 | 3150 | 3000 | 2700 | 3000 | 4300 | 3140 | 1660 | 2420 | 2040 | 2110 | 16600 |
| 28 | 2680 | 3010 | 2900 | 2800 | 3300 | 4930 | 3000 | 1700 | 2480 | 2380 | 1820 | 18500 |
| 29 | 2560 | 3430 | 2900 | 2900 | --- | 6960 | 3140 | 1850 | 2210 | 2860 | 1960 | 13200 |
| 30 | 2640 | 3770 | 3100 | 2700 | --- | 9680 | 3520 | 1930 | 1790 | 3340 | 2020 | 8550 |
| 31 | 2480 | --- | 3200 | 2700 | --- | 12400 | --- | 1530 | --- | 3200 | 1950 | --- |
| TOTAL | 214040 | 137280 | 101470 | 89300 | 78700 | 115370 | 168810 | 66600 | 55450 | 81540 | 66590 | 145520 |
| MEAN | 6905 | 4576 | 3273 | 2881 | 2811 | 3722 | 5627 | 2148 | 1848 | 2630 | 2148 | 4851 |
| MAX | 16500 | 9850 | 4000 | 3100 | 3300 | 12400 | 20000 | 4000 | 4290 | 9280 | 2880 | 18500 |
| MIN | 2480 | 2810 | 2640 | 2700 | 2600 | 2600 | 2030 | 1530 | 1150 | 1460 | 1820 | 1770 |

CAL YR 1985 TOTAL 1271160 MEAN 3483 MAX 16500 MIN 1430
WTR YR 1986 TOTAL 1320670 MEAN 3618 MAX 20000 MIN 1150



Base from U.S. Geological Survey
State base map, 1968

CENTRAL WISCONSIN RIVER BASIN

BEST COPY AVAILABLE

## 05397500 EAU CLAIRE RIVER AT KELLY, WI

LOCATION.--Lat 44°55'06", long 89°33'00", on line between secs.9 and 10, T.28 N., R.8 E., Marathon County, Hydrologic Unit 07070002, on right bank 50 ft downstream from County Highway SS bridge, 0.7 mi northeast of Kelly, 1.3 mi upstream from Big Sandy Creek, 4.5 mi upstream from mouth, and 5.0 mi southeast of Wausau.

DRAINAGE AREA.--375 mi$^2$.

PERIOD OF RECORD.--January 1914 to November 1926, August 1939 to current year.

REVISED RECORDS.--WSP 1508: 1915, 1916-17(M), 1919-26(M), 1940(M), 1945(M), 1950(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,177.88 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 17, 1953, nonrecording gage at same site at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: None, except for ice period listed in table below. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--59 years, 254 ft$^3$/s, 9.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft$^3$/s Aug. 21, 1926, gage height, 8.4 ft from graph based on gage readings, from rating curve extended above 6,000 ft$^3$/s; maximum gage height, 9.45 ft Mar. 24, 1979, ice jam; minimum observed, 8.0 ft$^3$/s July 17, 1944, gage height, 0.17 ft, probably result of temporary regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 5 | 1000 | 2,010 | 5.02 | Apr. 7 | 2100 | 1,590 | 4.31 |
| Nov. 2 | 1100 | 2,220 | 5.32 | Sept. 27 | 1800 | 2,920 | 6.22 |
| Mar. 31 | 2100 | *3,730 | *7.13 | Sept. 29 | 0800 | 3,040 | 6.38 |

Minimum daily discharge, 93 ft$^3$/s Sept. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 21 to Mar. 28.)

| | | | |
|---|---|---|---|
| 1.0 | 87 | 3.0 | 900 |
| 1.1 | 100 | 5.0 | 2,000 |
| 1.5 | 207 | 7.0 | 3,600 |
| 2.0 | 405 | 8.0 | 4,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1530 | 768 | 260 | 200 | 180 | 130 | 3430 | 310 | 109 | 172 | 173 | 96 |
| 2 | 1530 | 2040 | 260 | 200 | 180 | 140 | 2740 | 309 | 105 | 145 | 180 | 95 |
| 3 | 1140 | 1840 | 250 | 190 | 180 | 140 | 1870 | 268 | 103 | 130 | 194 | 95 |
| 4 | 850 | 1770 | 260 | 190 | 190 | 140 | 1260 | 237 | 107 | 127 | 184 | 97 |
| 5 | 1830 | 1080 | 270 | 190 | 190 | 150 | 1110 | 217 | 108 | 124 | 147 | 97 |
| 6 | 1600 | 728 | 280 | 190 | 190 | 150 | 1350 | 201 | 108 | 122 | 128 | 100 |
| 7 | 1570 | 593 | 270 | 180 | 180 | 140 | 1480 | 185 | 109 | 113 | 156 | 98 |
| 8 | 1050 | 508 | 270 | 180 | 180 | 140 | 1360 | 167 | 104 | 107 | 156 | 94 |
| 9 | 728 | 438 | 270 | 190 | 170 | 150 | 963 | 151 | 102 | 101 | 130 | 93 |
| 10 | 604 | 390 | 270 | 190 | 170 | 160 | 716 | 152 | 101 | 102 | 124 | 129 |
| 11 | 524 | 343 | 270 | 200 | 160 | 160 | 566 | 148 | 124 | 100 | 120 | 257 |
| 12 | 491 | 326 | 260 | 200 | 160 | 170 | 478 | 150 | 139 | 113 | 115 | 317 |
| 13 | 488 | 324 | 260 | 200 | 160 | 190 | 413 | 148 | 135 | 120 | 109 | 309 |
| 14 | 457 | 320 | 260 | 190 | 150 | 190 | 387 | 150 | 119 | 164 | 111 | 233 |
| 15 | 408 | 315 | 260 | 200 | 150 | 200 | 581 | 153 | 110 | 172 | 139 | 253 |
| 16 | 357 | 325 | 260 | 200 | 150 | 210 | 627 | 213 | 105 | 256 | 173 | 312 |
| 17 | 324 | 317 | 250 | 210 | 150 | 230 | 528 | 246 | 100 | 244 | 194 | 307 |
| 18 | 306 | 389 | 240 | 220 | 160 | 280 | 431 | 238 | 98 | 218 | 196 | 265 |
| 19 | 295 | 1210 | 230 | 220 | 160 | 340 | 376 | 213 | 286 | 419 | 198 | 265 |
| 20 | 278 | 1020 | 230 | 210 | 160 | 320 | 345 | 180 | 420 | 452 | 156 | 340 |
| 21 | 260 | 940 | 220 | 210 | 150 | 280 | 322 | 160 | 248 | 375 | 135 | 335 |
| 22 | 247 | 660 | 210 | 200 | 140 | 310 | 294 | 148 | 195 | 266 | 122 | 698 |
| 23 | 283 | 540 | 220 | 190 | 140 | 340 | 268 | 142 | 168 | 190 | 117 | 732 |
| 24 | 553 | 420 | 220 | 180 | 140 | 400 | 248 | 140 | 143 | 159 | 115 | 603 |
| 25 | 455 | 350 | 210 | 180 | 140 | 470 | 234 | 134 | 129 | 224 | 115 | 584 |
| 26 | 371 | 320 | 210 | 180 | 140 | 940 | 241 | 130 | 123 | 223 | 113 | 761 |
| 27 | 317 | 290 | 200 | 170 | 140 | 1000 | 271 | 126 | 466 | 193 | 111 | 2300 |
| 28 | 293 | 270 | 200 | 170 | 140 | 1400 | 300 | 120 | 635 | 180 | 107 | 2370 |
| 29 | 260 | 260 | 200 | 180 | --- | 2330 | 281 | 118 | 368 | 153 | 103 | 2790 |
| 30 | 246 | 260 | 200 | 180 | --- | 3080 | 279 | 115 | 230 | 133 | 100 | 1590 |
| 31 | 236 | --- | 200 | 180 | --- | 3690 | --- | 112 | --- | 127 | 98 | --- |
| TOTAL | 19881 | 19356 | 7470 | 5970 | 4500 | 17970 | 23769 | 5481 | 5397 | 5724 | 4319 | 16625 |
| MEAN | 641 | 645 | 241 | 193 | 161 | 580 | 792 | 177 | 180 | 185 | 139 | 554 |
| MAX | 1830 | 2040 | 280 | 220 | 190 | 3690 | 3430 | 310 | 635 | 452 | 198 | 2790 |
| MIN | 236 | 260 | 200 | 170 | 140 | 130 | 234 | 112 | 98 | 100 | 98 | 93 |
| CFSM | 1.71 | 1.72 | .64 | .52 | .43 | 1.55 | 2.11 | .47 | .48 | .49 | .37 | 1.48 |
| IN. | 1.97 | 1.92 | .74 | .59 | .45 | 1.78 | 2.36 | .54 | .54 | .57 | .43 | 1.65 |

CAL YR 1985 TOTAL 131064 MEAN 359 MAX 2040 MIN 78 CFSM .96 IN 13.00
WTR YR 1986 TOTAL 136440 MEAN 374 MAX 3690 MIN 93 CFSM 1.00 IN 13.53

## 05398000 WISCONSIN RIVER AT ROTHSCHILD, WI

LOCATION.--Lat 44°53'09", long 89°38'05", in sec.26, T.28 N., R.7 E., Marathon County, Hydrologic Unit 07070002, on left bank at Rothschild, 0.5 mi downstream from Rothschild Dam, 1.7 mi north of bridge on U.S. Highway 51, 2.0 mi downstream from Eau Claire River, and 5.0 mi upstream from Black Creek.

DRAINAGE AREA.--4,020 $mi^2$.

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,125.86 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at datum 10.00 ft higher. Auxiliary water-stage recorder in Mosinee Pond 8 mi downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

REMARKS.--Estimated daily discharges: None, except for ice-affected period, Dec. 1 to Mar. 10. Records good. Flow regulated by 20 reservoirs and 12 powerplants upstream from station.

AVERAGE DISCHARGE.--42 years, 3,584 $ft^3/s$.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,200 $ft^3/s$ Apr. 12, 1965, Mar. 31, 1967, gage height, 18.46 ft, datum then in use; minimum daily, 670 $ft^3/s$ Dec. 9, 1976.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Sept. 1, 1941, reached stage of 22.3 ft, datum then in use, from tailwater data at Rothschild dam, discharge, 75,000 $ft^3/s$ from rating curve extended above 45,000 $ft^3/s$.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,700 $ft^3/s$ Sept. 28, gage height, 27.96 ft; minimum daily, 1,420 $ft^3/s$ June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21700 | 6740 | 4500 | 3500 | 3100 | 3400 | 34000 | 5540 | 1640 | 2290 | 3410 | 2150 |
| 2 | 17300 | 20000 | 3700 | 3300 | 3300 | 3200 | 35400 | 5870 | 1710 | 2210 | 3570 | 2120 |
| 3 | 12100 | 18400 | 3100 | 3300 | 3400 | 3000 | 24900 | 4720 | 1680 | 1890 | 3090 | 1720 |
| 4 | 11100 | 14000 | 3800 | 3400 | 3500 | 3000 | 17100 | 4610 | 1420 | 2070 | 2560 | 2380 |
| 5 | 24400 | 9990 | 4200 | 3400 | 3400 | 3000 | 13800 | 3610 | 1580 | 2220 | 2640 | 2520 |
| 6 | 26500 | 8560 | 4400 | 3300 | 3300 | 3400 | 15100 | 3650 | 1610 | 2200 | 2570 | 2430 |
| 7 | 20100 | 8390 | 4300 | 3500 | 3300 | 3100 | 13800 | 3040 | 1810 | 2270 | 2520 | 1950 |
| 8 | 15800 | 7800 | 4300 | 3300 | 3300 | 3200 | 11300 | 2370 | 1720 | 1620 | 2860 | 2350 |
| 9 | 14700 | 7050 | 4400 | 3100 | 3300 | 3100 | 9170 | 2700 | 1580 | 1760 | 3150 | 2240 |
| 10 | 13200 | 6960 | 4400 | 3300 | 3300 | 3100 | 7810 | 2680 | 1760 | 1790 | 2560 | 3370 |
| 11 | 11600 | 5410 | 4100 | 3400 | 3100 | 3030 | 6750 | 2640 | 2260 | 2120 | 2800 | 6670 |
| 12 | 11600 | 4670 | 3900 | 3300 | 2900 | 2940 | 5990 | 2760 | 2140 | 2410 | 2830 | 7030 |
| 13 | 11200 | 5310 | 3900 | 3400 | 2900 | 3180 | 5510 | 2670 | 2290 | 3110 | 2440 | 5990 |
| 14 | 10500 | 4230 | 3900 | 3400 | 2900 | 3360 | 4370 | 2500 | 1780 | 2780 | 2540 | 4590 |
| 15 | 8540 | 4270 | 3700 | 3300 | 3000 | 3410 | 6410 | 2640 | 1690 | 2760 | 3330 | 3830 |
| 16 | 7430 | 4750 | 3900 | 3500 | 3000 | 3350 | 7110 | 2820 | 1860 | 3560 | 3810 | 6400 |
| 17 | 6550 | 4990 | 4000 | 3500 | 3000 | 3330 | 6430 | 2910 | 1810 | 3450 | 3360 | 5190 |
| 18 | 6050 | 4870 | 3800 | 3500 | 3200 | 3790 | 5730 | 2920 | 1460 | 3600 | 3080 | 4900 |
| 19 | 5220 | 8710 | 3700 | 3400 | 3200 | 3940 | 5370 | 2820 | 3240 | 10400 | 3150 | 4760 |
| 20 | 5590 | 9700 | 3500 | 3300 | 3200 | 4200 | 4620 | 2560 | 6640 | 11000 | 2500 | 4570 |
| 21 | 4920 | 6870 | 3500 | 3300 | 3200 | 5130 | 4660 | 2750 | 4000 | 7420 | 2540 | 4970 |
| 22 | 5080 | 7050 | 3300 | 3300 | 3000 | 4830 | 4240 | 2440 | 4090 | 4540 | 2490 | 10400 |
| 23 | 5120 | 5790 | 3600 | 3300 | 3100 | 5050 | 3680 | 2290 | 2890 | 3620 | 2880 | 15900 |
| 24 | 5360 | 5770 | 3800 | 3400 | 3200 | 5250 | 3090 | 2390 | 2600 | 3020 | 2550 | 11700 |
| 25 | 5610 | 5070 | 3700 | 3300 | 3100 | 6180 | 3640 | 2000 | 2280 | 2960 | 2310 | 9630 |
| 26 | 4050 | 4780 | 3500 | 3400 | 3200 | 8900 | 3800 | 1980 | 2350 | 3870 | 2760 | 13100 |
| 27 | 4190 | 4620 | 3400 | 3400 | 3100 | 12000 | 4890 | 1970 | 4520 | 3080 | 2500 | 30600 |
| 28 | 3860 | 4330 | 3400 | 3200 | 3200 | 13000 | 4690 | 2010 | 5210 | 2970 | 2290 | 41100 |
| 29 | 3660 | 4260 | 3300 | 330 | --- | 20300 | 4760 | 2250 | 3540 | 3190 | 2150 | 26400 |
| 30 | 3550 | 4520 | 3300 | 320 | --- | 29700 | 4930 | 2330 | 2960 | 4080 | 2400 | 15700 |
| 31 | 3630 | --- | 3400 | 300 | --- | 30800 | --- | 2220 | --- | 3900 | 2490 | --- |
| TOTAL | 310710 | 217860 | 117700 | 10350 | 88700 | 207170 | 283050 | 90660 | 76120 | 108160 | 86130 | 256660 |
| MEAN | 10020 | 7262 | 3797 | 339 | 3168 | 6683 | 9435 | 2925 | 2537 | 3489 | 2778 | 8555 |
| MAX | 26500 | 20000 | 4500 | 350 | 3500 | 30800 | 35400 | 5870 | 6640 | 11000 | 3810 | 41100 |
| MIN | 3550 | 4230 | 3100 | 300 | 2900 | 2940 | 3090 | 1970 | 1420 | 1620 | 2150 | 1720 |

CAL YR 1985 TOTAL 1839120 MEAN 503 MAX 26500 MIN 1510
WTR YR 1986 TOTAL 1946420 MEAN 533 MAX 41100 MIN 1420

## 05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI

LOCATION.--Lat 44°49'19", long 90°04'46", on line between sec.13, T.27 N., R.3 E., and sec.18, T.27 N., R.4 E., Marathon County, Hydrologic Unit 07070002, on left bank 15 ft upstream from bridge on State Highway 97, 1.0 mi north of Stratford, and 1.4 mi downstream from small tributary.

DRAINAGE AREA.--224 mi$^2$.

PERIOD OF RECORD.--July 1914 to December 1925, April 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1917, 1920-22, 1926, 1946, 1948, 1950. WSP 1508: 1915-25(M), 1937, 1946(M), 1948(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,154.24 ft above National Geodetic Vertical Datum of 1929. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mi upstream at different datum. Apr. 30, 1937, to Sept. 15, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--60 years (1914-25, 1937-86), 178 ft$^3$/s, 10.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft$^3$/s Sept. 9, 1938, gage height, 24.5 ft, from floodmarks, based on rating curve extended above 24,000 ft$^3$/s; no flow Aug. 17, 1947, Jan. 22 to Feb. 5, 1961.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 5, 1914, reached a stage of 20.7 ft, from floodmarks; discharge, 40,000 ft$^3$/s, former site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 5 | 0300 | 2,820 | 9.91 | July 24 | 2215 | 3,980 | --- |
| Nov. 1 | 2215 | 4,230 | 11.57 | July 25 | 0100 | --- | 10.88 |
| Mar. 26 | ---- | 3,000 | ice jam | Sept. 22 | 0530 | 8,890 | 15.39 |
| Mar. 28 | 2300 | 8,950 | 15.45 | Sept. 25 | 1330 | 3,930 | 11.28 |
| | | | | Sept. 27 | 0530 | *10,400 | *16.34 |

Minimum discharge, 5.0 ft$^3$/s, June 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Rate of change in stage used as factor Oct. 1, 2, 4, 6-9, Nov. 1-4, 18, 20, Apr. 2, 5, 6, 16, July 24-26, Aug. 14, 16, Sept. 10, 12, 13, 15, 16, 19-21, 23-25, 28-30; stage-discharge relation affected by ice Nov. 11-15, Nov. 25 to Mar. 28.)

| | | | | | |
|---|---|---|---|---|---|
| 2.3 | 5.0 | 3.0 | 48 | 6.0 | 670 |
| 2.4 | 8.0 | 3.5 | 104 | 8.0 | 1,540 |
| 2.6 | 17 | 4.0 | 175 | 10.0 | 2,850 |
| 2.8 | 30 | 5.0 | 375 | 13.0 | 5,710 |
| | | | | 16.0 | 9,780 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1590 | 2280 | 60 | 26 | 35 | 39 | 1360 | 304 | 8.3 | 18 | 39 | 17 |
| 2 | 646 | 2430 | 56 | 26 | 35 | 41 | 732 | 195 | 7.6 | 14 | 35 | 15 |
| 3 | 357 | 806 | 54 | 26 | 36 | 42 | 422 | 134 | 7.0 | 11 | 31 | 17 |
| 4 | 527 | 416 | 50 | 26 | 36 | 43 | 340 | 92 | 6.8 | 11 | 25 | 18 |
| 5 | 2340 | 252 | 48 | 27 | 36 | 44 | 630 | 69 | 6.8 | 11 | 33 | 32 |
| 6 | 952 | 191 | 45 | 26 | 35 | 43 | 724 | 90 | 6.2 | 11 | 59 | 24 |
| 7 | 446 | 177 | 43 | 26 | 36 | 42 | 436 | 61 | 6.7 | 9.7 | 48 | 18 |
| 8 | 662 | 144 | 42 | 26 | 37 | 42 | 271 | 38 | 6.8 | 8.7 | 76 | 15 |
| 9 | 524 | 119 | 42 | 27 | 36 | 45 | 185 | 32 | 6.8 | 8.1 | 125 | 15 |
| 10 | 351 | 101 | 42 | 28 | 35 | 48 | 138 | 28 | 6.7 | 7.8 | 100 | 928 |
| 11 | 269 | 86 | 40 | 29 | 34 | 48 | 108 | 27 | 27 | 8.4 | 70 | 1930 |
| 12 | 283 | 80 | 37 | 30 | 33 | 49 | 91 | 27 | 61 | 13 | 57 | 862 |
| 13 | 478 | 76 | 34 | 31 | 34 | 52 | 84 | 27 | 21 | 17 | 38 | 363 |
| 14 | 304 | 84 | 33 | 31 | 36 | 52 | 142 | 28 | 15 | 19 | 210 | 205 |
| 15 | 206 | 94 | 31 | 30 | 37 | 54 | 890 | 27 | 11 | 83 | 1040 | 687 |
| 16 | 153 | 107 | 31 | 30 | 37 | 58 | 459 | 42 | 11 | 178 | 462 | 641 |
| 17 | 120 | 121 | 30 | 32 | 37 | 70 | 267 | 37 | 8.8 | 60 | 226 | 342 |
| 18 | 105 | 486 | 28 | 33 | 38 | 150 | 172 | 36 | 8.0 | 32 | 135 | 437 |
| 19 | 100 | 1960 | 26 | 33 | 39 | 700 | 129 | 28 | 8.1 | 450 | 90 | 741 |
| 20 | 86 | 695 | 25 | 32 | 40 | 540 | 108 | 24 | 7.7 | 238 | 62 | 840 |
| 21 | 74 | 347 | 25 | 32 | 39 | 430 | 102 | 19 | 7.6 | 105 | 54 | 1350 |
| 22 | 66 | 233 | 26 | 33 | 39 | 370 | 90 | 17 | 9.7 | 61 | 43 | 7080 |
| 23 | 67 | 169 | 26 | 32 | 39 | 430 | 70 | 15 | 10 | 36 | 35 | 2160 |
| 24 | 112 | 134 | 26 | 32 | 40 | 760 | 59 | 14 | 12 | 391 | 32 | 611 |
| 25 | 98 | 110 | 25 | 34 | 38 | 1500 | 49 | 14 | 10 | 1770 | 31 | 2660 |
| 26 | 75 | 90 | 25 | 33 | 39 | 2500 | 70 | 13 | 9.0 | 388 | 35 | 2260 |
| 27 | 62 | 80 | 25 | 32 | 39 | 1700 | 140 | 13 | 41 | 184 | 57 | 8480 |
| 28 | 55 | 74 | 26 | 32 | 37 | 4500 | 108 | 11 | 45 | 154 | 47 | 2530 |
| 29 | 53 | 66 | 26 | 33 | --- | 6090 | 97 | 10 | 41 | 107 | 31 | 955 |
| 30 | 47 | 60 | 26 | 34 | --- | 4500 | 151 | 9.3 | 25 | 71 | 24 | 485 |
| 31 | 45 | --- | 26 | 34 | --- | 2120 | --- | 8.6 | --- | 52 | 20 | --- |
| TOTAL | 11253 | 12068 | 1079 | 936 | 1033 | 27102 | 8624 | 1489.9 | 458.6 | 4527.7 | 3370 | 36718 |
| MEAN | 363 | 402 | 34.8 | 30.2 | 36.9 | 874 | 287 | 48.1 | 15.3 | 146 | 109 | 1224 |
| MAX | 2340 | 2430 | 60 | 34 | 40 | 6090 | 1360 | 304 | 61 | 1770 | 1040 | 8480 |
| MIN | 45 | 60 | 25 | 26 | 33 | 39 | 49 | 8.6 | 6.2 | 7.8 | 20 | 15 |
| CFSM | 1.62 | 1.80 | .16 | .14 | .17 | 3.90 | 1.28 | .22 | .07 | .65 | .49 | 5.46 |
| IN. | 1.87 | 2.00 | .18 | .16 | .17 | 4.50 | 1.43 | .25 | .08 | .75 | .56 | 6.10 |

CAL YR 1985 TOTAL 73831.5 MEAN 202 MAX 3860 MIN 3.9 CFSM .90 IN 12.26
WTR YR 1986 TOTAL 108659.2 MEAN 298 MAX 8480 MIN 6.2 CFSM 1.33 IN 18.05

## 05400650 LITTLE PLOVER RIVER AT PLOVER, WI

**LOCATION.**--Lat 44°28'26", long 89°31'44", in SW 1/4 sec.14, T.23 N., R.8 E., Portage County, Hydrologic Unit 07070003, on right bank at bridge on town road, 1.0 mi northeast of Plover and 1.2 mi upstream from mouth.

**DRAINAGE AREA.**--19.0 mi$^2$, of which 7.33 mi$^2$ probably is noncontributing.

**PERIOD OF RECORD.**--July 1959 to current year.

**REVISED RECORDS.**--WDR WI-76-1: Drainage area.

**GAGE.**--Water-stage recorder and parshall flume. Datum of gage is 1,068.34 ft above National Geodetic Vertical Datum of 1929. Prior to May 1960, nonrecording gage at same site and datum 0.88 ft lower.

**REMARKS.**--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good.

**AVERAGE DISCHARGE.**--27 years, 10.6 ft$^3$/s.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 105 ft$^3$/s Nov. 1, 1984, gage height, 3.19 ft; minimum, 1.4 ft$^3$/s Nov. 16, 1974, gage height, 0.28 ft, result of temporary dam at flume entrance.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 22 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 2 | 0345 | 35 | 2.10 | July 25 | 0515 | 31 | 1.93 |
| Mar. 26 | 0300 | 37 | 2.18 | Sept.22 | 0915 | *61 | *2.59 |
| May 16 | 0545 | 30 | 1.89 | Sept.25 | 1630 | 37 | 2.16 |

**NOTE.**--Six additional peaks ranging from 22 to 26 ft$^3$/s were not listed.

Minimum, 6.6 ft$^3$/s Aug. 25, gage height, 0.73 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3, 15, Jan. 27, and Feb. 10, 12, 14-17, 22, 23.)

| | | | |
|---|---|---|---|
| 0.8 | 7.3 | 2.0 | 32 |
| 1.0 | 10 | 2.5 | 54 |
| 1.5 | 20 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | 23 | 13 | 13 | 11 | 11 | 20 | 16 | 14 | 12 | 11 | 9.2 |
| 2 | 13 | 30 | 13 | 13 | 11 | 11 | 19 | 15 | 13 | 12 | 13 | 9.1 |
| 3 | 13 | 19 | 13 | 13 | 11 | 11 | 19 | 15 | 13 | 11 | 12 | 9.2 |
| 4 | 13 | 17 | 14 | 13 | 11 | 11 | 20 | 15 | 13 | 11 | 11 | 9.4 |
| 5 | 16 | 16 | 14 | 13 | 11 | 11 | 21 | 15 | 13 | 11 | 11 | 9.0 |
| 6 | 14 | 16 | 14 | 12 | 11 | 11 | 21 | 15 | 13 | 10 | 11 | 8.9 |
| 7 | 13 | 16 | 14 | 12 | 11 | 10 | 19 | 15 | 13 | 9.9 | 11 | 8.8 |
| 8 | 14 | 15 | 14 | 11 | 11 | 11 | 18 | 15 | 12 | 10 | 11 | 8.6 |
| 9 | 13 | 15 | 14 | 12 | 10 | 11 | 18 | 14 | 12 | 9.9 | 10 | 8.9 |
| 10 | 13 | 15 | 14 | 12 | 10 | 11 | 17 | 14 | 12 | 9.7 | 11 | 14 |
| 11 | 12 | 15 | 14 | 12 | 10 | 11 | 17 | 15 | 14 | 10 | 10 | 16 |
| 12 | 14 | 15 | 14 | 12 | 10 | 11 | 17 | 15 | 14 | 11 | 9.8 | 12 |
| 13 | 13 | 15 | 13 | 11 | 10 | 11 | 17 | 15 | 13 | 11 | 9.7 | 11 |
| 14 | 13 | 15 | 13 | 12 | 10 | 11 | 19 | 16 | 13 | 10 | 10 | 11 |
| 15 | 13 | 15 | 13 | 12 | 10 | 11 | 21 | 16 | 13 | 11 | 10 | 14 |
| 16 | 13 | 17 | 13 | 12 | 10 | 11 | 20 | 27 | 13 | 12 | 9.7 | 12 |
| 17 | 13 | 18 | 13 | 12 | 10 | 11 | 18 | 21 | 13 | 11 | 12 | 12 |
| 18 | 13 | 19 | 13 | 12 | 11 | 16 | 18 | 23 | 11 | 11 | 11 | 12 |
| 19 | 13 | 20 | 13 | 12 | 11 | 22 | 18 | 19 | 11 | 10 | 10 | 13 |
| 20 | 12 | 17 | 13 | 12 | 11 | 18 | 17 | 18 | 12 | 10 | 9.9 | 14 |
| 21 | 12 | 15 | 12 | 12 | 10 | 16 | 17 | 17 | 11 | 10 | 9.6 | 16 |
| 22 | 12 | 15 | 13 | 12 | 10 | 16 | 16 | 17 | 11 | 9.5 | 9.5 | 45 |
| 23 | 13 | 15 | 14 | 11 | 10 | 18 | 16 | 17 | 12 | 9.2 | 9.3 | 26 |
| 24 | 14 | 15 | 13 | 12 | 11 | 19 | 16 | 16 | 12 | 15 | 9.0 | 20 |
| 25 | 13 | 15 | 13 | 12 | 11 | 22 | 16 | 16 | 11 | 24 | 9.7 | 30 |
| 26 | 13 | 15 | 13 | 11 | 11 | 34 | 17 | 16 | 12 | 12 | 10 | 27 |
| 27 | 12 | 15 | 13 | 10 | 11 | 27 | 16 | 16 | 14 | 12 | 10 | 21 |
| 28 | 12 | 15 | 13 | 11 | 10 | 27 | 16 | 15 | 12 | 12 | 9.6 | 19 |
| 29 | 12 | 14 | 13 | 11 | --- | 28 | 16 | 14 | 12 | 11 | 9.5 | 23 |
| 30 | 12 | 14 | 12 | 11 | --- | 23 | 16 | 14 | 12 | 12 | 9.5 | 21 |
| 31 | 12 | --- | 13 | 11 | --- | 21 | --- | 14 | --- | 12 | 9.3 | --- |
| TOTAL | 403 | 496 | 411 | 367 | 295 | 493 | 536 | 506 | 374 | 352.2 | 319.1 | 470.1 |
| MEAN | 13.0 | 16.5 | 13.3 | 11.8 | 10.5 | 15.9 | 17.9 | 16.3 | 12.5 | 11.4 | 10.3 | 15.7 |
| MAX | 16 | 30 | 14 | 13 | 11 | 34 | 21 | 27 | 14 | 24 | 13 | 45 |
| MIN | 12 | 14 | 12 | 10 | 10 | 10 | 16 | 14 | 11 | 9.2 | 9.0 | 8.6 |

CAL YR 1985 TOTAL 5309.5 MEAN 14.5 MAX 36 MIN 7.7
WTR YR 1986 TOTAL 5022.4 MEAN 13.8 MAX 45 MIN 8.6

## 05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI

**LOCATION**.--Lat 44°23'41", long 89°49'31", in SW 1/4 sec.8, T.22 N., R.6 E., Wood County, Hydrologic Unit 07070003, at Consolidated Water Power Company, 0.2 mi upstream from U.S. Highway 13 bridge in Wisconsin Rapids.

**DRAINAGE AREA**.--5,420 $mi^2$.

**PERIOD OF RECORD**.--May 1914 to March 1950 (published as "near Nekoosa"), October 1957 to current year.

**REVISED RECORDS**.--WSP 1308: 1915(M).

**GAGE**.--Water-stage recorders on headwater and tailwater. Elevation of powerplant pond is 1,010 ft and datum of powerplant gages is 0.00 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.). May 1914 to March 1950, at site 9.6 mi downstream at different datum. March 1950 to Sept. 30, 1981, at Centralia Powerplant at Nekoosa Papers, Inc., 2.6 mi downstream. March 1950 to Dec. 31, 1973, datum was 887.83 ft above National Geodetic Vertical Datum. Jan. 1, 1974, changed to present datum.

**REMARKS**.--No estimated daily discharges. Records good for discharges greater than 2,500 $ft^3/s$, and fair to poor for discharges less than 2,500 $ft^3/s$. Discharge computed from powerplant records on basis of load-discharge rating of hydroelectric units as developed by manufacturer and tainter-gate ratings based on theoretical formulas. Flow regulated by 20 reservoirs and many powerplants upstream from station. Water diverted periodically from pond of Wisconsin Rapids powerplant into Cranberry Creek, a tributary of Yellow River, for cranberry culture. These diversions, in cubic feet per second, for water year October 1984 to September 1985, were as follows:

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| June | 24 | 39 | June | 29 | 100 | July | 4 | 38 | July | 9 | 100 | July | 14 | 100 |
| | 25 | 85 | | 30 | 100 | | 5 | 0 | | 10 | 100 | | 15 | 100 |
| | 26 | 100 | July | 1 | 100 | | 6 | 92 | | 11 | 100 | | 16 | 100 |
| | 27 | 100 | | 2 | 100 | | 7 | 100 | | 12 | 100 | | 17 | 100 |
| | 28 | 100 | | 3 | 100 | | 8 | 100 | | 13 | 100 | | 18 | 12 |

**COOPERATION**.--Figures of daily discharges were provided by Consolidated Water Power Company and Wisconsin River Improvement Company. Records were reviewed by the Geological Survey.

**AVERAGE DISCHARGE**.--64 years (1914-50, 1957-86), 5,028 $ft^3/s$.

**EXTREMES FOR PERIOD OF RECORD**.--Maximum discharge, 70,400 $ft^3/s$ Sept. 12, 1938, gage height, 19.10 ft, from rating curve extended above 58,000 $ft^3/s$; minimum, 26 $ft^3/s$ Sept. 7, 1942; minimum daily, 165 $ft^3/s$ Aug. 12, 1934.

**EXTREMES FOR CURRENT YEAR**.--Maximum discharge, 59,000 $ft^3/s$ Sept. 29; minimum daily, 1,880 $ft^3/s$ July 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28600 | 9980 | 5890 | 4480 | 4880 | 4510 | 39700 | 5640 | 2500 | 3260 | 4370 | 3030 |
| 2 | 25300 | 26200 | 5540 | 4400 | 4590 | 4740 | 40900 | 6140 | 2280 | 2900 | 4000 | 2850 |
| 3 | 17100 | 29000 | 4140 | 4470 | 4590 | 4780 | 40400 | 5510 | 2220 | 2480 | 3830 | 3010 |
| 4 | 15900 | 23000 | 4260 | 4500 | 4610 | 4800 | 26600 | 5060 | 2380 | 2140 | 3530 | 3090 |
| 5 | 24100 | 15500 | 5100 | 4780 | 4720 | 4590 | 20100 | 5170 | 2600 | 2230 | 3220 | 2980 |
| 6 | 32100 | 12100 | 5840 | 4240 | 4690 | 4370 | 20200 | 4630 | 2550 | 2350 | 3210 | 2810 |
| 7 | 27000 | 10400 | 6150 | 4390 | 4750 | 4330 | 18900 | 4570 | 2210 | 1880 | 3270 | 2690 |
| 8 | 20800 | 10400 | 6310 | 4200 | 4580 | 4380 | 16800 | 4020 | 2210 | 2190 | 3360 | 2570 |
| 9 | 18900 | 10400 | 6220 | 4180 | 4390 | 4380 | 12600 | 4080 | 2180 | 2340 | 3130 | 2830 |
| 10 | 17600 | 9120 | 6290 | 4250 | 4480 | 4320 | 8940 | 3790 | 2200 | 2360 | 3020 | 4970 |
| 11 | 16300 | 6990 | 6330 | 4250 | 4380 | 4380 | 8330 | 2930 | 2550 | 2290 | 2980 | 9670 |
| 12 | 14400 | 6200 | 5770 | 4420 | 4450 | 4410 | 7570 | 3030 | 2760 | 2590 | 3010 | 11400 |
| 13 | 14600 | 6230 | 5010 | 4420 | 4440 | 4370 | 7170 | 3040 | 2410 | 2730 | 2940 | 10500 |
| 14 | 12800 | 6680 | 4750 | 4240 | 4340 | 4390 | 5890 | 3440 | 2360 | 2740 | 3360 | 8300 |
| 15 | 10500 | 6090 | 4820 | 4240 | 4360 | 4520 | 8150 | 3300 | 2400 | 3480 | 3560 | 6670 |
| 16 | 9200 | 5980 | 5120 | 4210 | 4400 | 4590 | 9900 | 3390 | 2380 | 4000 | 3910 | 7000 |
| 17 | 8680 | 6640 | 5150 | 4410 | 4330 | 4680 | 8870 | 3960 | 2390 | 4370 | 4300 | 7510 |
| 18 | 6730 | 7350 | 4710 | 4800 | 4470 | 6100 | 8440 | 4050 | 2440 | 4360 | 3970 | 7490 |
| 19 | 6220 | 13700 | 4750 | 4410 | 4400 | 5760 | 7760 | 4120 | 3700 | 11700 | 3650 | 6900 |
| 20 | 7430 | 18400 | 4750 | 4200 | 4120 | 5010 | 6890 | 3780 | 6640 | 13100 | 3420 | 8110 |
| 21 | 6010 | 12000 | 4390 | 3980 | 4490 | 5030 | 5700 | 3340 | 3810 | 9070 | 3420 | 10500 |
| 22 | 5120 | 8820 | 4220 | 3830 | 4400 | 7210 | 5170 | 3280 | 4290 | 4610 | 3390 | 25700 |
| 23 | 6440 | 7780 | 4050 | 3740 | 4540 | 9370 | 5070 | 3240 | 3880 | 3830 | 3130 | 29100 |
| 24 | 6880 | 6290 | 4120 | 3660 | 4400 | 9660 | 4770 | 3080 | 3290 | 5080 | 3080 | 19500 |
| 25 | 6820 | 6150 | 4020 | 3920 | 4390 | 12600 | 4380 | 2920 | 2620 | 5440 | 3120 | 18200 |
| 26 | 6210 | 5990 | 4680 | 4140 | 4380 | 17800 | 4000 | 2830 | 3040 | 4910 | 3750 | 22000 |
| 27 | 5120 | 5820 | 4710 | 4340 | 4230 | 22000 | 4560 | 2740 | 5150 | 5850 | 3440 | 33200 |
| 28 | 4370 | 5490 | 4600 | 4250 | 4320 | 21700 | 5220 | 2750 | 4960 | 5750 | 3300 | 55100 |
| 29 | 4380 | 4680 | 4500 | 4200 | --- | 29100 | 5200 | 2690 | 4340 | 4510 | 3300 | 42500 |
| 30 | 4210 | 4520 | 4480 | 4210 | --- | 40300 | 5120 | 2500 | 3820 | 6290 | 3250 | 27000 |
| 31 | 4440 | --- | 4500 | 4610 | --- | 43800 | --- | 2460 | --- | 5730 | 3160 | --- |
| TOTAL | 394260 | 307900 | 155170 | 132370 | 125120 | 311980 | 373300 | 115480 | 92560 | 136560 | 106380 | 397180 |
| MEAN | 12720 | 10260 | 5005 | 4270 | 4469 | 10060 | 12440 | 3725 | 3085 | 4405 | 3432 | 13240 |
| MAX | 32100 | 29000 | 6330 | 4800 | 4880 | 43800 | 40900 | 6140 | 6640 | 13100 | 4370 | 55100 |
| MIN | 4210 | 4520 | 4020 | 3660 | 4120 | 4320 | 4000 | 2460 | 2180 | 1880 | 2940 | 2570 |

CAL YR 1985 TOTAL 2433270 MEAN 6666 MAX 32100 MIN 1930
WTR YR 1986 TOTAL 2648260 MEAN 7256 MAX 55100 MIN 1880

## 05402000 YELLOW RIVER AT BABCOCK, WI

**LOCATION.**--Lat 44°18'05", long 90°07'15", in NW 1/4 sec.14, T.21 N., R.3 E., Wood County, Hydrologic Unit 07070003, on right bank at downstream side of bridge on State Highway 80 at Babcock, 1.9 mi upstream from Hemlock Creek.

**DRAINAGE AREA.**--215 $mi^2$.

**PERIOD OF RECORD.**--March 1944 to current year.

**REVISED RECORDS.**--WSP 1308: 1944(M), 1946-47(M), 1949(M). WDR WI-77-1: Drainage area. WDR WI-82-1: 1981 (P).

**GAGE.**--Water-stage recorder. Datum of gage is 954.75 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1948, nonrecording gage at same site and datum.

**REMARKS.**--Estimated daily discharges: Oct. 1-3, and ice-affected period, Nov. 27 to Mar. 28. Records good except for estimated daily discharges, which are fair. There is a large recreation dam about 5.0 mi upstream.

**AVERAGE DISCHARGE.**--42 years, 161 $ft^3/s$, 10.17 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 11,600 $ft^3/s$ Apr. 2, 1952, gage height, 17.38 ft; minimum observed, 0.94 $ft^3/s$ Aug. 11, 1985, gage height, 1.84 ft.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,200 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Oct. 30 | 2300 | 2,350 | 10.58 | Sept. 12 | 0030 | 2,740 | 11.32 |
| Nov. 16 | 2200 | 1,990 | 9.83 | Sept. 22 | 2130 | *8,640 | --- |
| Mar. 26 | ---- | A 4,000 | ice jam | Sept. 23 | 0100 | --- | *15.85 |
| July 26 | 0215 | 2,070 | 9.93 | Sept. 26 | 0245 | 3,050 | 11.70 |

A Estimated, daily mean discharge.

Minimum daily discharge, 10 $ft^3/s$ June 10-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1100 | 1340 | 80 | 50 | 40 | 37 | 871 | 81 | 14 | 80 | 173 | 29 |
| 2 | 860 | 754 | 80 | 50 | 40 | 38 | 610 | 71 | 15 | 54 | 123 | 25 |
| 3 | 620 | 470 | 78 | 50 | 40 | 39 | 352 | 62 | 14 | 44 | 103 | 24 |
| 4 | 417 | 306 | 80 | 49 | 40 | 40 | 400 | 59 | 12 | 36 | 125 | 27 |
| 5 | 322 | 229 | 80 | 49 | 40 | 40 | 440 | 55 | 11 | 32 | 119 | 28 |
| 6 | 622 | 189 | 82 | 48 | 39 | 39 | 601 | 49 | 11 | 27 | 84 | 27 |
| 7 | 589 | 156 | 94 | 47 | 39 | 38 | 671 | 44 | 11 | 25 | 62 | 25 |
| 8 | 461 | 130 | 90 | 45 | 39 | 38 | 517 | 38 | 11 | 22 | 56 | 23 |
| 9 | 320 | 117 | 98 | 45 | 38 | 38 | 327 | 35 | 11 | 19 | 50 | 25 |
| 10 | 227 | 115 | 94 | 45 | 38 | 38 | 220 | 33 | 10 | 17 | 50 | 49 |
| 11 | 178 | 128 | 92 | 45 | 38 | 40 | 164 | 31 | 10 | 15 | 70 | 1430 |
| 12 | 153 | 149 | 88 | 44 | 38 | 41 | 130 | 31 | 14 | 15 | 68 | 2370 |
| 13 | 144 | 166 | 84 | 43 | 37 | 42 | 108 | 31 | 18 | 16 | 56 | 1420 |
| 14 | 162 | 220 | 78 | 43 | 37 | 43 | 103 | 31 | 14 | 23 | 52 | 867 |
| 15 | 160 | 320 | 76 | 42 | 36 | 44 | 406 | 31 | 13 | 50 | 82 | 677 |
| 16 | 144 | 967 | 74 | 42 | 36 | 45 | 819 | 38 | 17 | 45 | 115 | 774 |
| 17 | 127 | 1150 | 72 | 44 | 36 | 44 | 727 | 46 | 20 | 142 | 119 | 626 |
| 18 | 108 | 1000 | 70 | 45 | 36 | 43 | 390 | 56 | 16 | 164 | 352 | 447 |
| 19 | 90 | 647 | 68 | 44 | 36 | 80 | 284 | 53 | 14 | 188 | 246 | 333 |
| 20 | 79 | 357 | 66 | 43 | 36 | 150 | 199 | 47 | 13 | 332 | 135 | 666 |
| 21 | 72 | 285 | 64 | 43 | 36 | 280 | 156 | 42 | 13 | 276 | 79 | 880 |
| 22 | 72 | 298 | 64 | 43 | 36 | 560 | 121 | 35 | 12 | 152 | 55 | 4900 |
| 23 | 94 | 138 | 64 | 43 | 36 | 1000 | 99 | 32 | 14 | 92 | 47 | 7260 |
| 24 | 136 | 121 | 62 | 43 | 37 | 1500 | 83 | 29 | 18 | 64 | 42 | 3080 |
| 25 | 109 | 99 | 60 | 43 | 37 | 1900 | 74 | 27 | 18 | 478 | 35 | 1890 |
| 26 | 83 | 93 | 58 | 42 | 37 | 4000 | 72 | 25 | 16 | 1590 | 35 | 2640 |
| 27 | 69 | 88 | 58 | 41 | 37 | 3600 | 68 | 22 | 50 | 957 | 43 | 1800 |
| 28 | 60 | 82 | 56 | 40 | 37 | 2000 | 75 | 20 | 233 | 790 | 62 | 1150 |
| 29 | 64 | 82 | 54 | 40 | --- | 1800 | 93 | 18 | 250 | 603 | 52 | 819 |
| 30 | 1280 | 80 | 52 | 40 | --- | 1560 | 88 | 17 | 140 | 532 | 42 | 754 |
| 31 | 1740 | --- | 52 | 40 | --- | 1180 | --- | 16 | --- | 300 | 34 | --- |
| TOTAL | 10662 | 10276 | 2268 | 1371 | 1052 | 20337 | 9268 | 1205 | 1033 | 7380 | 2766 | 35065 |
| MEAN | 344 | 343 | 73.2 | 44.2 | 37.6 | 656 | 309 | 38.9 | 34.4 | 238 | 89.2 | 1169 |
| MAX | 1740 | 1340 | 98 | 50 | 40 | 4000 | 871 | 81 | 250 | 1590 | 352 | 7260 |
| MIN | 60 | 80 | 52 | 40 | 36 | 37 | 68 | 16 | 10 | 15 | 34 | 23 |
| CFSM | 1.60 | 1.60 | .34 | .21 | .18 | 3.05 | 1.44 | .18 | .16 | 1.11 | .42 | 5.44 |
| IN. | 1.84 | 1.78 | .39 | .24 | .18 | 3.52 | 1.60 | .21 | .18 | 1.28 | .48 | 6.07 |

CAL YR 1985 TOTAL 84585.3 MEAN 232 MAX 2100 MIN 1.6 CFSM 1.08 IN 14.64
WTR YR 1986 TOTAL 102683.0 MEAN 281 MAX 7260 MIN 10 CFSM 1.31 IN 17.77

## 05403500 LEMONWEIR RIVER AT NEW LISBON, WI.

LOCATION.--Lat 43°52'47", long 90°09'40", in SE 1/4 sec.8 T.16 N., R.3 E., Juneau County, Hydrologic Unit 07070003, on right bank 5 ft downstream of bridge on State Highway 80 in New Lisbon, 200 ft downstream from recreation dam and 1.2 mi upstream from Webster Creek.

DRAINAGE AREA.--507 $mi^2$.

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WSP 1308: 1944(M), 1949-50(M). WDR WI-78-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 867.05 ft above National Geodetic Vertical Datum of 1929. Prior to May 5, 1948, nonrecording gage at site 100 ft downstream at same datum, and May 5, 1948 to Aug. 21, 1984, nonrecording gage near center of span on downstream side of bridge at same datum.

REMARKS.--Estimated daily discharge: None, except for ice-affected period, Nov. 26 to Mar. 8. Records good except those for ice-affected period, which is fair. Occasional regulation by dam 200 ft upstream. Water diverted periodically into the basin from the Yellow and Black River basins for cranberry culture.

AVERAGE DISCHARGE.--42 years, 381 $ft^3/s$, 10.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,880 $ft^3/s$ May 8, 1960, gage height, 12.94 ft from graph based on gage readings; minimum observed, 29 $ft^3/s$ June 9, 1976, gage height, 0.47 ft during period of dam repair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,710 $ft^3/s$ Sept. 26, gage height, 11.35 ft; minimum daily, 123 $ft^3/s$ Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 589 | 467 | 420 | 330 | 300 | 280 | 1530 | 327 | 149 | 1470 | 763 | 151 |
| 2 | 591 | 710 | 430 | 330 | 300 | 280 | 1320 | 298 | 143 | 1250 | 727 | 148 |
| 3 | 565 | 803 | 450 | 330 | 300 | 270 | 1220 | 284 | 137 | 937 | 644 | 141 |
| 4 | 539 | 890 | 430 | 330 | 310 | 270 | 1180 | 286 | 135 | 699 | 503 | 138 |
| 5 | 502 | 955 | 410 | 330 | 330 | 270 | 1180 | 303 | 158 | 521 | 365 | 135 |
| 6 | 453 | 903 | 400 | 320 | 320 | 270 | 1250 | 281 | 190 | 404 | 286 | 132 |
| 7 | 431 | 821 | 390 | 310 | 320 | 270 | 1290 | 255 | 199 | 340 | 248 | 126 |
| 8 | 435 | 735 | 390 | 310 | 310 | 270 | 1220 | 229 | 186 | 303 | 243 | 123 |
| 9 | 404 | 700 | 390 | 310 | 300 | 276 | 1090 | 214 | 166 | 257 | 239 | 123 |
| 10 | 354 | 686 | 390 | 320 | 300 | 288 | 954 | 202 | 151 | 229 | 247 | 146 |
| 11 | 333 | 661 | 380 | 320 | 290 | 292 | 870 | 195 | 158 | 233 | 237 | 381 |
| 12 | 330 | 629 | 370 | 320 | 280 | 293 | 835 | 196 | 191 | 251 | 228 | 522 |
| 13 | 340 | 617 | 360 | 320 | 280 | 305 | 787 | 202 | 218 | 339 | 212 | 569 |
| 14 | 350 | 636 | 360 | 320 | 270 | 322 | 745 | 213 | 228 | 405 | 203 | 580 |
| 15 | 344 | 647 | 350 | 320 | 270 | 343 | 753 | 211 | 236 | 459 | 206 | 627 |
| 16 | 339 | 700 | 350 | 320 | 270 | 378 | 738 | 230 | 227 | 534 | 221 | 599 |
| 17 | 335 | 809 | 340 | 330 | 270 | 436 | 716 | 250 | 197 | 548 | 223 | 545 |
| 18 | 339 | 903 | 340 | 330 | 270 | 614 | 664 | 275 | 172 | 519 | 201 | 549 |
| 19 | 353 | 976 | 330 | 330 | 270 | 1010 | 617 | 281 | 156 | 471 | 191 | 576 |
| 20 | 363 | 966 | 330 | 330 | 270 | 1330 | 584 | 271 | 146 | 405 | 183 | 619 |
| 21 | 366 | 905 | 330 | 330 | 270 | 1510 | 551 | 255 | 141 | 356 | 176 | 671 |
| 22 | 370 | 867 | 330 | 330 | 270 | 1970 | 510 | 235 | 138 | 315 | 170 | 1180 |
| 23 | 365 | 822 | 330 | 330 | 270 | 2360 | 457 | 221 | 141 | 268 | 169 | 1900 |
| 24 | 364 | 725 | 330 | 330 | 270 | 2520 | 424 | 208 | 148 | 221 | 159 | 2510 |
| 25 | 352 | 641 | 330 | 330 | 270 | 2630 | 418 | 197 | 142 | 262 | 151 | 3350 |
| 26 | 351 | 580 | 330 | 320 | 280 | 2670 | 407 | 188 | 139 | 365 | 153 | 3670 |
| 27 | 362 | 500 | 330 | 300 | 280 | 2650 | 405 | 177 | 464 | 505 | 161 | 3360 |
| 28 | 364 | 470 | 330 | 300 | 280 | 2510 | 410 | 171 | 875 | 703 | 165 | 2960 |
| 29 | 355 | 440 | 330 | 300 | --- | 2330 | 385 | 172 | 1060 | 796 | 164 | 2660 |
| 30 | 337 | 420 | 330 | 300 | --- | 2050 | 345 | 165 | 1390 | 818 | 157 | 2350 |
| 31 | 321 | --- | 330 | 300 | --- | 1780 | --- | 156 | --- | 796 | 154 | --- |
| TOTAL | 12196 | 21584 | 11240 | 9930 | 8020 | 33047 | 23855 | 7148 | 8181 | 15979 | 8149 | 31541 |
| MEAN | 393 | 719 | 363 | 320 | 286 | 1066 | 795 | 231 | 273 | 515 | 263 | 1051 |
| MAX | 591 | 976 | 450 | 330 | 330 | 2670 | 1530 | 327 | 1390 | 1470 | 763 | 3670 |
| MIN | 321 | 420 | 330 | 300 | 270 | 270 | 345 | 156 | 135 | 221 | 151 | 123 |
| CFSM | .78 | 1.42 | .72 | .63 | .56 | 2.10 | 1.57 | .46 | .54 | 1.02 | .52 | 2.07 |
| IN. | .89 | 1.58 | .82 | .73 | .59 | 2.42 | 1.75 | .52 | .60 | 1.17 | .60 | 2.31 |

CAL YR 1985 TOTAL 164368 MEAN 450 MAX 2230 MIN 98 CFSM .89 IN 12.06
WTR YR 1986 TOTAL 190870 MEAN 523 MAX 3670 MIN 123 CFSM 1.03 IN 14.00

## 05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI

LOCATION.--Lat 43°36'22", long 89°45'25", in NW 1/4 sec.14, T.13 N., R.6 E., Sauk County, Hydrologic Unit 07070003, on right bank 0.5 mi downstream from Dell Creek and 1.8 mi southeast of Wisconsin Dells.

DRAINAGE AREA.--8,090 mi$^2$.

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1728: 1936(M). WSP 1914: 1951, 1953-55. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 801.48 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1963, water-stage recorder at same site at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good, except those for ice-affected period which is fair. Flow regulated by 24 reservoirs above station. In 1938, when the maximum of record occurred, there were 22 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock, were not in existence. Diurnal fluctuation is caused by powerplant of Wisconsin Power and Light Co. at Wisconsin Dells.

AVERAGE DISCHARGE.--52 years, 6,895 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,200 ft$^3$/s Sept. 14, 1938, gage height, 23.83 ft, present datum; minimum daily, 1,060 ft$^3$/s Aug. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53,400 ft$^3$/s Sept. 30, gage height, 17.89 ft; minimum daily, 3,370 ft$^3$/s July 9.

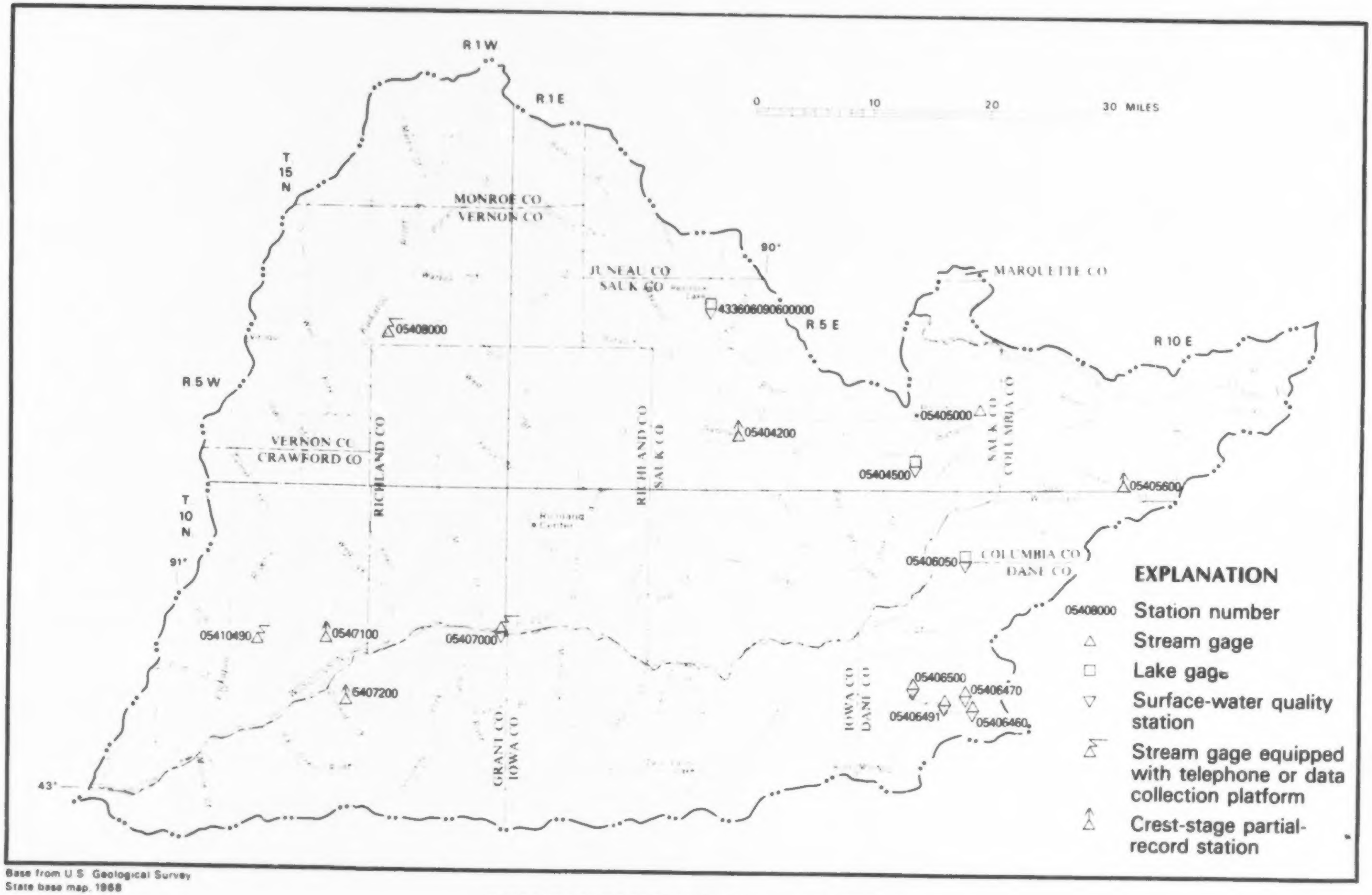
RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 21 to Aug. 22, stage-discharge relation affected by ice Nov. 29 to Mar. 24.)

| | | | |
|---|---|---|---|
| 4.0 | 2,980 | 12.0 | 25,600 |
| 6.0 | 7,110 | 15.0 | 38,400 |
| 9.0 | 15,100 | 18.0 | 54,100 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20300 | 7170 | 6600 | 6400 | 4700 | 5000 | 40600 | 7070 | 3990 | 6880 | 9310 | 3910 |
| 2 | 26200 | 13700 | 6200 | 6200 | 4700 | 4900 | 43500 | 6930 | 3630 | 5460 | 8020 | 3760 |
| 3 | 26500 | 24800 | 6800 | 6000 | 4700 | 4900 | 43900 | 6920 | 3570 | 5370 | 7170 | 3640 |
| 4 | 18500 | 27000 | 6600 | 6200 | 4700 | 5000 | 42600 | 6650 | 3520 | 5310 | 6100 | 4040 |
| 5 | 18700 | 28100 | 7000 | 6200 | 4900 | 5000 | 39400 | 6310 | 3780 | 4840 | 5570 | 4020 |
| 6 | 25800 | 24500 | 6800 | 6000 | 4800 | 5200 | 31500 | 6050 | 3850 | 4310 | 5340 | 3850 |
| 7 | 30200 | 16600 | 7000 | 4800 | 4800 | 5000 | 22800 | 6010 | 3890 | 3950 | 5270 | 3500 |
| 8 | 29700 | 13900 | 7000 | 4700 | 4800 | 5000 | 15100 | 5940 | 3880 | 3410 | 5240 | 3410 |
| 9 | 24600 | 14300 | 7000 | 4600 | 4800 | 5000 | 12700 | 5560 | 3710 | 3370 | 5130 | 3440 |
| 10 | 18900 | 15800 | 6800 | 4800 | 4900 | 5000 | 12200 | 5470 | 3650 | 3590 | 5090 | 4390 |
| 11 | 18800 | 16300 | 7000 | 4700 | 4800 | 5000 | 10100 | 5490 | 3780 | 3790 | 5160 | 9010 |
| 12 | 17500 | 10800 | 6800 | 4700 | 5000 | 5000 | 9430 | 5640 | 4260 | 3820 | 4490 | 11500 |
| 13 | 17800 | 8730 | 6800 | 4700 | 4700 | 5000 | 9170 | 5500 | 4500 | 4610 | 4420 | 13200 |
| 14 | 17900 | 8960 | 6400 | 4700 | 4800 | 5000 | 8970 | 5200 | 4720 | 4650 | 4400 | 13700 |
| 15 | 14600 | 8940 | 6600 | 4700 | 4800 | 5200 | 9060 | 5450 | 4870 | 4140 | 4530 | 10100 |
| 16 | 11600 | 7990 | 6600 | 4800 | 4700 | 5600 | 8640 | 5690 | 5030 | 4590 | 4660 | 10100 |
| 17 | 9600 | 7850 | 6400 | 4800 | 4700 | 6000 | 8660 | 5550 | 4260 | 5880 | 5400 | 10300 |
| 18 | 8640 | 8410 | 6400 | 4800 | 4700 | 6400 | 8840 | 5880 | 4020 | 6500 | 6560 | 10900 |
| 19 | 9220 | 10400 | 6400 | 4800 | 4700 | 6800 | 8990 | 5320 | 3960 | 7230 | 5270 | 12300 |
| 20 | 8860 | 15400 | 6400 | 4800 | 4700 | 6800 | 11700 | 6180 | 4820 | 14600 | 4950 | 10600 |
| 21 | 9160 | 21400 | 6400 | 4800 | 5400 | 7400 | 10700 | 6610 | 7400 | 17100 | 4930 | 11200 |
| 22 | 8860 | 17000 | 6200 | 4800 | 6000 | 8600 | 10100 | 5730 | 5630 | 13900 | 5090 | 14900 |
| 23 | 8110 | 14000 | 6200 | 4800 | 6400 | 10000 | 8440 | 5980 | 5440 | 6990 | 4690 | 30900 |
| 24 | 9110 | 11400 | 6000 | 4700 | 6200 | 12000 | 8420 | 5820 | 5490 | 5760 | 4710 | 38200 |
| 25 | 8850 | 9620 | 6000 | 4800 | 6200 | 13400 | 8350 | 5180 | 5070 | 5890 | 4570 | 30000 |
| 26 | 8350 | 9180 | 6000 | 4700 | 5800 | 14400 | 7560 | 4720 | 4210 | 7390 | 4520 | 30200 |
| 27 | 7960 | 8610 | 6000 | 4400 | 5000 | 16800 | 7220 | 4680 | 6430 | 6210 | 4960 | 34200 |
| 28 | 7190 | 8430 | 6200 | 4800 | 4500 | 23100 | 7280 | 4410 | 11700 | 7300 | 4780 | 41000 |
| 29 | 6330 | 6800 | 6000 | 4700 | --- | 24500 | 7250 | 4310 | 8320 | 8870 | 4490 | 48800 |
| 30 | 6280 | 6800 | 6000 | 4800 | --- | 33900 | 7160 | 3600 | 7190 | 9810 | 4430 | 52700 |
| 31 | 6170 | --- | 6200 | 4800 | --- | 39300 | --- | 4190 | --- | 9880 | 4260 | --- |
| TOTAL | 460290 | 402890 | 200800 | 155500 | 140900 | 310200 | 480340 | 174040 | 148570 | 205400 | 163510 | 481770 |
| MEAN | 14850 | 13430 | 6477 | 5016 | 5032 | 10010 | 16010 | 5614 | 4952 | 6626 | 5275 | 16060 |
| MAX | 30200 | 28100 | 7000 | 6400 | 6400 | 39300 | 43900 | 7070 | 11700 | 17100 | 9310 | 52700 |
| MIN | 6170 | 6800 | 6000 | 4400 | 4500 | 4900 | 7160 | 3600 | 3520 | 3370 | 4260 | 3410 |

CAL YR 1985 TOTAL 3150470 MEAN 8631 MAX 30200 MIN 3030
WTR YR 1986 TOTAL 3324210 MEAN 9107 MAX 52700 MIN 3370



Base from U.S. Geological Survey
State base map, 1968

LOWER WISCONSIN RIVER BASIN

BEST COPY AVAILABLE

## 433606090060000 REDSTONE LAKE NEAR LA VALLE, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°36'06", long 90°06'00", in SE 1/4 sec.14, T.13 N., R.3 E., Sauk County, Hydrologic Unit 07070004, 1.8 mi northeast of LaValle.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Tom Meronek. Elevation of gage is 916 ft. from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.49 ft, Sept. 7, 1985; minimum observed, 7.11 ft, July 20-24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.92 ft, Nov. 17; minimum observed, 7.18 ft, Aug. 10, 24, Sept. 7.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.63 | 7.43 | | | | | 7.78 | 7.36 | --- | --- | 7.26 | --- |
| 2 | 7.59 | 7.85 | | | | | 7.78 | 7.34 | --- | --- | --- | --- |
| 3 | 7.51 | 7.47 | | | | | 7.78 | 7.34 | --- | --- | --- | --- |
| 4 | 7.53 | 7.45 | | | | | 7.68 | 7.32 | --- | --- | --- | --- |
| 5 | 7.53 | 7.43 | | | | | 7.66 | 7.28 | --- | --- | --- | --- |
| 6 | 7.51 | 7.41 | | | | | 7.68 | 7.28 | 7.24 | 7.30 | --- | --- |
| 7 | 7.43 | 7.41 | | | | | --- | 7.28 | --- | --- | --- | 7.18 |
| 8 | 7.43 | 7.47 | | | | | --- | 7.28 | --- | --- | --- | --- |
| 9 | 7.41 | 7.47 | | | | | 7.58 | 7.28 | --- | --- | --- | --- |
| 10 | 7.41 | 7.43 | | | | | 7.48 | 7.28 | --- | --- | 7.18 | 7.78 |
| 11 | 7.39 | 7.53 | | | | | 7.46 | 7.34 | --- | --- | --- | --- |
| 12 | 7.39 | 7.53 | | | | | 7.42 | 7.34 | 7.24 | 7.30 | --- | --- |
| 13 | 7.39 | 7.63 | | | | | 7.38 | 7.34 | --- | --- | --- | 7.70 |
| 14 | 7.39 | 7.73 | | | | | 7.50 | 7.34 | --- | --- | --- | --- |
| 15 | 7.37 | 7.73 | | | | | 7.50 | 7.46 | --- | --- | --- | --- |
| 16 | 7.35 | 7.73 | | | | | 7.48 | 7.46 | --- | --- | --- | --- |
| 17 | 7.35 | 7.92 | | | | | 7.46 | 7.48 | --- | --- | 7.26 | --- |
| 18 | 7.35 | --- | | | | | 7.46 | 7.54 | 7.20 | 7.40 | --- | --- |
| 19 | 7.35 | --- | | | | | 7.44 | --- | --- | --- | --- | --- |
| 20 | 7.35 | --- | | | | | 7.38 | --- | --- | --- | --- | --- |
| 21 | 7.33 | --- | | | | | 7.34 | --- | --- | --- | --- | 7.52 |
| 22 | 7.33 | --- | | | | | 7.34 | --- | --- | --- | --- | 7.64 |
| 23 | 7.31 | --- | | | | | 7.34 | --- | --- | --- | --- | --- |
| 24 | 7.49 | --- | | | | | 7.34 | 7.34 | 7.30 | 7.26 | 7.18 | --- |
| 25 | 7.43 | --- | | | | | 7.34 | 7.34 | --- | --- | --- | --- |
| 26 | 7.33 | --- | | | | | 7.34 | 7.34 | --- | --- | --- | --- |
| 27 | 7.33 | --- | | | | | 7.36 | 7.30 | --- | --- | --- | --- |
| 28 | 7.31 | --- | | | | | 7.38 | 7.30 | --- | --- | --- | --- |
| 29 | 7.31 | --- | | | | | 7.36 | 7.30 | --- | --- | --- | 7.58 |
| 30 | 7.43 | --- | | | | | 7.34 | 7.28 | 7.32 | --- | 7.32 | --- |
| 31 | 7.43 | --- | | | | | --- | 7.28 | --- | --- | --- | --- |
| MEAN | 7.41 | --- | | | | | --- | --- | --- | --- | --- | --- |
| MAX | 7.63 | --- | | | | | --- | --- | --- | --- | --- | --- |
| MIN | 7.31 | --- | | | | | --- | --- | --- | --- | --- | --- |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°36'27", long 90°05'25", in NE 1/4 sec.14, T.13 N., R.3 E., Sauk County, Hydrologic Unit 07070004, near center of lake, and 2.3 mi northeast of LaValle.

PERIOD OF RECORD.--April 1985 to current year.

REMARKS.--Secchi disc readings made by Tom Meronek.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 6 | 1.1 | NOV. 12 | 1.2 | APR. 30 | 0.9 | JUNE 6 | 1.5 | JULY 12 | 0.8 | AUG. 26 | 0.9 |
| OCT. 12 | 1.1 | NOV. 18 | 1.2 | MAY 6 | 0.8 | JUNE 12 | 0.9 | JULY 18 | 0.8 | AUG. 30 | 0.9 |
| OCT. 18 | 1.1 | APR. 6 | 0.3 | MAY 12 | 1.1 | JUNE 18 | 0.9 | JULY 24 | 0.8 | SEPT. 7 | 0.9 |
| OCT. 24 | 1.1 | APR. 12 | 0.8 | MAY 18 | 1.5 | JUNE 24 | 0.8 | AUG. 1 | 0.8 | SEPT. 13 | 0.9 |
| OCT. 30 | 1.1 | APR. 18 | 0.8 | MAY 24 | 1.5 | JUNE 30 | 0.8 | AUG. 10 | 0.8 | SEPT. 21 | 0.7 |
| NOV. 6 | 1.2 | APR. 24 | 0.9 | MAY 30 | 1.5 | JULY 6 | 0.8 | AUG. 17 | 0.8 | SEPT. 29 | 1.0 |

## 05404500 DEVILS LAKE NEAR BARABOO, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°25'18", long 89°43'38", in NW 1/4 NE 1/4 sec.24, T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, in Devils Lake State Park, 3.5 mi south of Baraboo.

DRAINAGE AREA.--4.79 mi². Area of Devils Lake, 361 acres.

PERIOD OF RECORD.--June 1922 to August 1930, June to August 1932, June 1934 to September 1981 (fragmentary). October 1981 to September 1984, data unpublished in district files. October 1984 to current year.

REVISED RECORDS.--WDR WI-78-1: Drainage area.

GAGE.--Nonrecording gage. Elevation of lake from reference mark read about twice a week except in winter. Datum of gage is 955.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Lake has no surface outlet. Lake was ice covered Dec. 3 to Apr. 1.

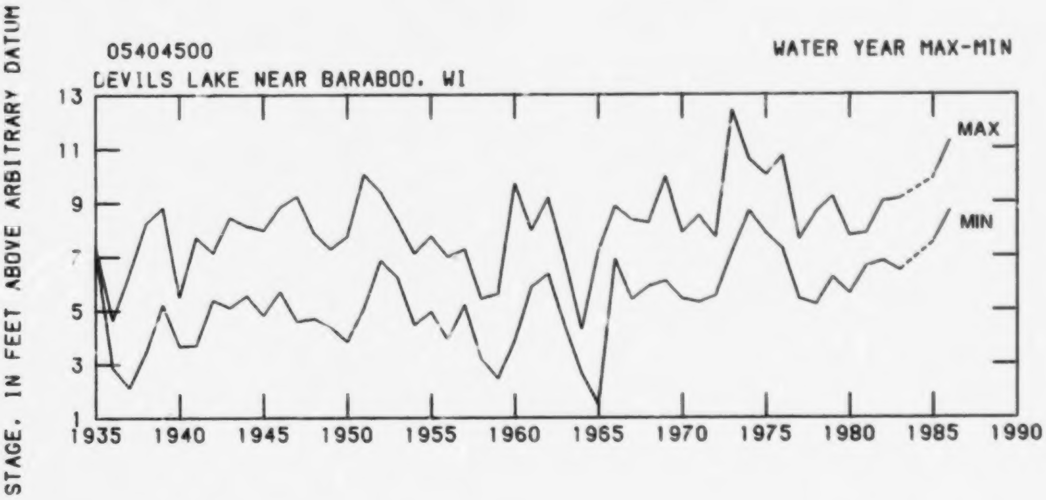
COOPERATION.--Gage readings furnished by Kenneth Lange of Devils Lake State Park.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.40 ft, May 31, June 1, 1973; minimum observed, 1.49 ft Feb. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.26 ft, June 27; minimum observed, 8.67 ft, Oct. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 3 | 8.68 | NOV. 5 | 9.32 | APR. 4 | 11.12 | MAY 7 | 10.84 | JUNE 30 | 9.92 | AUG. 11 | 9.44 |
| OCT. 9 | 8.67 | NOV. 11 | 9.47 | APR. 10 | 11.14 | MAY 13 | 10.72 | JULY 9 | 9.74 | AUG. 18 | 9.30 |
| OCT. 18 | 8.75 | NOV. 19 | 9.89 | APR. 15 | 11.13 | MAY 19 | 9.90 | JULY 14 | 9.78 | AUG. 28 | 9.30 |
| OCT. 24 | 8.81 | NOV. 25 | 10.98 | APR. 22 | 11.05 | JUNE 17 | 10.33 | JULY 21 | 9.70 | SEPT. 4 | 9.14 |
| NOV. 1 | 8.94 | MAR. 31 | 11.04 | MAY 2 | 10.92 | JUNE 27 | 11.26 | JULY 28 | 9.74 | SEPT. 18 | 9.23 |
| | | | | | | | | AUG. 6 | 9.52 | SEPT. 28 | 9.74 |



### WATER-QUALITY RECORDS

LOCATION.--43°25'00", long 89°44'00", in NW 1/4 sec.24, T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, near center of lake, and 3.6 mi south of Baraboo.

PERIOD OF RECORD.--July 1982 to current year; July 1982 to September 1984 data at Devils Lake State Park office files.

REMARKS.--Secchi disc readings made by Sandy Engel.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 9 | 3.1 | APR. 29 | 7.6 | MAY 27 | 6.8 | JULY 2 | 7.8 | JULY 29 | 7.4 | AUG. 27 | 3.6 |
| OCT. 24 | 3.1 | MAY 6 | 7.0 | JUNE 3 | 8.8 | JULY 8 | 9.4 | JULY 31 | 6.9 | SEPT. 3 | 3.9 |
| NOV. 11 | 2.9 | MAY 13 | 9.5 | JUNE 10 | 11.1 | JULY 14 | 8.7 | AUG. 5 | 6.9 | SEPT. 8 | 4.7 |
| APR. 3 | 4.4 | MAY 14 | 9.3 | JUNE 17 | 10.4 | JULY 16 | 8.1 | AUG. 13 | 4.8 | SEPT. 16 | 4.5 |
| APR. 15 | 4.7 | MAY 19 | 5.2 | JUNE 24 | 9.8 | JULY 22 | 7.0 | AUG. 19 | 4.6 | SEPT. 24 | 4.5 |

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## 05405000 BARABOO RIVER NEAR BARABOO, WI

LOCATION.--Lat 43°28'51", long 89°38'09", in NW 1/4 sec.35, T.12 N., R.7 E., Sauk County, Hydrologic Unit 07070004, on left bank 50 ft downstream from highway bridge, 0.3 mi downstream from Rowley Creek and 5.3 mi east of Baraboo.

DRAINAGE AREA.--609 mi$^2$.

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

REVISED RECORDS.--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914-15(M), 1916-17, 1918-20(M), 1944(M), 1949(M). WSP 1914: 1948, 1950, 1956. WDR WI-75-1: 1968. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 788.21 ft above National Geodetic Vertical Datum of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi upstream at datum 7.6 ft higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharge: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair.

AVERAGE DISCHARGE.--51 (water years 1915-21, 1943-86), 382 ft$^3$/s, 8.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,900 ft$^3$/s Mar. 26, 1917, gage height, 17.5 ft, estimated, site and datum then in use, from rating curve extended above 6,000 ft$^3$/s; minimum observed, 9.0 ft$^3$/s Feb. 17, 1944, gage height, 5.08 ft; minimum daily, 26 ft$^3$/s Oct. 6, 1950.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Aug. 6, 1935, reached a stage of 15.8 ft from floodmarks, site and datum in use in 1922, discharge, 5,100 ft$^3$/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,110 ft$^3$/s Mar. 23, gage height, 17.65 ft; minimum, 212 ft$^3$/s Aug. 24, 25, gage height, 6.97 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 3-10, 18-20; stage-discharge relation affected by ice Nov. 26 to Mar. 8.)

| | | | |
|---|---|---|---|
| 6.9 | 212 | 13.0 | 1,650 |
| 7.0 | 235 | 15.0 | 2,230 |
| 9.0 | 697 | 18.0 | 3,230 |
| 11.0 | 1,170 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 794 | 866 | 480 | 450 | 380 | 340 | 964 | 398 | 309 | 359 | 368 | 263 |
| 2 | 867 | 1590 | 520 | 450 | 370 | 340 | 796 | 383 | 296 | 321 | 318 | 251 |
| 3 | 874 | 1590 | 560 | 450 | 370 | 340 | 698 | 367 | 290 | 317 | 293 | 243 |
| 4 | 819 | 1360 | 540 | 440 | 370 | 350 | 681 | 352 | 282 | 320 | 276 | 250 |
| 5 | 666 | 1240 | 520 | 430 | 380 | 360 | 716 | 341 | 272 | 301 | 262 | 243 |
| 6 | 555 | 1110 | 500 | 420 | 400 | 360 | 738 | 343 | 279 | 276 | 256 | 244 |
| 7 | 530 | 886 | 500 | 410 | 450 | 370 | 733 | 348 | 289 | 268 | 253 | 241 |
| 8 | 522 | 698 | 490 | 410 | 450 | 380 | 687 | 343 | 304 | 262 | 265 | 231 |
| 9 | 470 | 647 | 490 | 410 | 440 | 387 | 618 | 331 | 294 | 264 | 263 | 222 |
| 10 | 433 | 627 | 480 | 400 | 430 | 474 | 545 | 318 | 292 | 261 | 268 | 293 |
| 11 | 413 | 627 | 470 | 400 | 420 | 599 | 497 | 314 | 295 | 273 | 261 | 892 |
| 12 | 471 | 653 | 480 | 400 | 410 | 701 | 469 | 315 | 304 | 288 | 250 | 929 |
| 13 | 520 | 736 | 500 | 400 | 400 | 734 | 453 | 330 | 315 | 336 | 243 | 937 |
| 14 | 516 | 878 | 500 | 400 | 390 | 752 | 489 | 384 | 326 | 415 | 240 | 910 |
| 15 | 497 | 952 | 500 | 400 | 380 | 808 | 583 | 397 | 336 | 463 | 239 | 895 |
| 16 | 462 | 1170 | 520 | 400 | 370 | 872 | 625 | 505 | 317 | 414 | 245 | 843 |
| 17 | 426 | 1390 | 500 | 400 | 360 | 1050 | 645 | 614 | 297 | 390 | 250 | 603 |
| 18 | 430 | 1460 | 490 | 400 | 350 | 1580 | 613 | 689 | 289 | 397 | 255 | 414 |
| 19 | 517 | 1580 | 480 | 400 | 350 | 2590 | 531 | 673 | 278 | 366 | 268 | 365 |
| 20 | 552 | 1510 | 470 | 400 | 350 | 3010 | 476 | 602 | 269 | 318 | 245 | 387 |
| 21 | 507 | 1280 | 460 | 400 | 350 | 3010 | 448 | 515 | 265 | 294 | 228 | 539 |
| 22 | 466 | 1110 | 450 | 400 | 350 | 3060 | 432 | 419 | 272 | 279 | 222 | 853 |
| 23 | 447 | 909 | 450 | 400 | 340 | 3090 | 417 | 373 | 275 | 267 | 220 | 986 |
| 24 | 506 | 687 | 450 | 400 | 340 | 2970 | 400 | 358 | 308 | 258 | 215 | 925 |
| 25 | 581 | 505 | 450 | 400 | 340 | 2570 | 388 | 346 | 330 | 300 | 214 | 970 |
| 26 | 556 | 470 | 450 | 390 | 340 | 2100 | 388 | 336 | 326 | 425 | 349 | 1170 |
| 27 | 503 | 450 | 450 | 390 | 340 | 1770 | 393 | 337 | 361 | 638 | 460 | 1360 |
| 28 | 444 | 430 | 450 | 390 | 340 | 1590 | 404 | 332 | 325 | 869 | 594 | 1160 |
| 29 | 406 | 420 | 450 | 390 | --- | 1470 | 407 | 329 | 343 | 713 | 600 | 1340 |
| 30 | 383 | 430 | 450 | 390 | --- | 1350 | 405 | 325 | 392 | 467 | 452 | 1300 |
| 31 | 380 | --- | 450 | 390 | --- | 1170 | --- | 321 | --- | 417 | 307 | --- |
| TOTAL | 16518 | 28261 | 14950 | 12610 | 10560 | 40547 | 16639 | 12338 | 9130 | 11537 | 9179 | 20259 |
| MEAN | 533 | 942 | 482 | 407 | 377 | 1308 | 555 | 398 | 304 | 372 | 296 | 675 |
| MAX | 874 | 1590 | 560 | 450 | 450 | 3090 | 964 | 689 | 392 | 869 | 600 | 1360 |
| MIN | 380 | 420 | 450 | 390 | 340 | 340 | 388 | 314 | 265 | 258 | 214 | 222 |
| CFSM | .88 | 1.55 | .79 | .67 | .62 | 2.15 | .91 | .65 | .50 | .61 | .49 | 1.11 |
| IN. | 1.01 | 1.73 | .91 | .77 | .65 | 2.48 | 1.02 | .75 | .56 | .70 | .56 | 1.24 |

CAL YR 1985 TOTAL 211992 MEAN 581 MAX 3040 MIN 200 CFSM .95 IN 12.95
WTR YR 1986 TOTAL 202528 MEAN 555 MAX 3090 MIN 214 CFSM .91 IN 12.37

## 05406050 FISH LAKE NEAR SAUK CITY, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°17'02", long 89°39'15", in NE 1/4 SW 1/4 sec.3, T.9 N., R.7 E., Dane County, Hydrologic Unit 07070005, on south side of lake near Ganser's Tavern and Dance Hall, 0.4 mi southwest of Crystal Lake, and 3.1 mi east of Sauk City.

DRAINAGE AREA.--8.97 mi$^2$, includes 7.11 mi$^2$ without surface drainage. Area of Fish Lake, 252 acres.

PERIOD OF RECORD.--November 1966 to September 1981 (fragmentary). April 1985 to current year.

REVISED RECORDS.--WDR WI 77-1: Drainage area.

GAGE.--Nonrecording gage in lake bed. Datum of gage is 848.07 ft above National Geodetic Vertical Datum of 1929. Staff gage read by Marie Ganser.

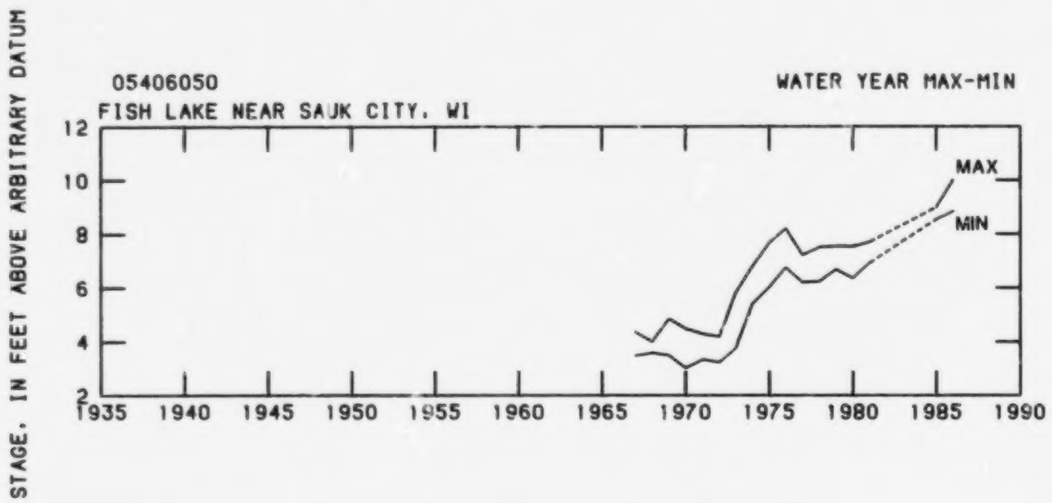
REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 10.00 ft, Sept. 17, 1986; minimum observed, 3.02 ft, Aug. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.00 ft, Sept. 17; minimum observed, 8.84 ft, Oct. 3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 3 | 8.84 | OCT. 25 | 8.96 | NOV. 5 | 8.98 | JUNE 4 | 9.86 | JUNE 11 | 9.88 | JUNE 21 | 9.80 |
| OCT. 14 | 8.92 | OCT. 27 | 8.96 | NOV. 14 | 8.92 | JUNE 6 | 9.81 | JUNE 18 | 9.80 | SEPT. 17 | 10.00 |
| OCT. 21 | 8.94 | NOV. 1 | 8.96 | NOV. 21 | 8.96 | | | | | | |



### WATER-QUALITY RECORDS

LOCATION.--Lat 43°17'14", long 89°39'08", in NW 1/4 sec.3, T.9 N., R.7 E., Dane County, Hydrologic Unit 07070005, near center of lake, and 3.6 mi east of Sauk City.

PERIOD OF RECORD.--May 1985 to current year.

REMARKS.--Secchi disc readings made by Marie Ganser.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|
| OCT. 14 | 4.3 | OCT. 23 | 4.9 | NOV. 5 | 1.8 |

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## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI

LOCATION.--Lat 43°06'38", long 89°38'44", in NW 1/4 SE 1/4 sec.3, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on left bank at bridge at County Trunk KP at Cross Plains.

DRAINAGE AREA.--14.6 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 880 ft, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 28 to Feb. 6 and July 31 to Aug. 4. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122 ft$^3$ s July 25, 1985, gage height, 12.80 ft; minimum, 8.9 ft$^3$/s Dec. 6, 1984, gage height, 9.27 ft; minimum gage height, 9.20 ft Oct. 3, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45 ft$^3$/s Nov. 1, gage height, 9.84 ft; maximum gage height, 10.06 ft, Aug. 26 (backwater from vegetation); minimum 11 ft$^3$/s Sept. 2, 3, 5; minimum gage height, 9.20 ft, Oct. 3.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used June 7 to Sept. 25; stage-discharge relation affected by aquatic vegetation Jan. 28 to Feb. 6 and July 31 to Aug. 4.)

| | | | |
|---|---|---|---|
| 9.2 | 12 | 10.3 | 81 |
| 9.3 | 15 | 10.5 | 107 |
| 9.5 | 23 | 10.7 | 138 |
| 9.9 | 45 | 10.9 | 175 |
| 10.1 | 59 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14 | 34 | 20 | 16 | 16 | 15 | 21 | 20 | 17 | 15 | 15 | 13 |
| 2 | 14 | 32 | 19 | 16 | 16 | 15 | 20 | 20 | 16 | 14 | 15 | 11 |
| 3 | 12 | 22 | 19 | 16 | 17 | 15 | 22 | 20 | 16 | 14 | 15 | 11 |
| 4 | 14 | 21 | 19 | 16 | 20 | 15 | 20 | 19 | 16 | 14 | 15 | 12 |
| 5 | 15 | 21 | 19 | 16 | 25 | 16 | 20 | 20 | 16 | 14 | 15 | 12 |
| 6 | 14 | 21 | 19 | 16 | 23 | 16 | 20 | 19 | 14 | 14 | 15 | 13 |
| 7 | 15 | 22 | 19 | 15 | 23 | 16 | 20 | 18 | 16 | 15 | 15 | 14 |
| 8 | 13 | 19 | 18 | 15 | 23 | 16 | 19 | 18 | 18 | 17 | 12 | 13 |
| 9 | 14 | 20 | 18 | 16 | 21 | 16 | 20 | 18 | 17 | 16 | 15 | 14 |
| 10 | 16 | 20 | 18 | 16 | 19 | 23 | 19 | 18 | 17 | 17 | 18 | 19 |
| 11 | 16 | 20 | 18 | 16 | 18 | 23 | 20 | 18 | 15 | 28 | 16 | 28 |
| 12 | 18 | 20 | 18 | 16 | 17 | 20 | 20 | 18 | 17 | 27 | 15 | 22 |
| 13 | 17 | 22 | 18 | 16 | 17 | 19 | 20 | 18 | 16 | 22 | 15 | 17 |
| 14 | 16 | 23 | 17 | 16 | 17 | 20 | 22 | 21 | 16 | 19 | 16 | 16 |
| 15 | 16 | 22 | 17 | 15 | 16 | 20 | 22 | 22 | 17 | 17 | 15 | 15 |
| 16 | 15 | 24 | 17 | 16 | 16 | 21 | 22 | 20 | 17 | 14 | 14 | 15 |
| 17 | 15 | 21 | 17 | 16 | 16 | 23 | 20 | 25 | 16 | 16 | 14 | 14 |
| 18 | 15 | 24 | 17 | 16 | 16 | 30 | 21 | 27 | 15 | 18 | 14 | 14 |
| 19 | 16 | 27 | 16 | 17 | 15 | 36 | 20 | 22 | 15 | 16 | 13 | 14 |
| 20 | 18 | 23 | 16 | 17 | 15 | 25 | 20 | 19 | 13 | 15 | 13 | 15 |
| 21 | 17 | 22 | 16 | 17 | 15 | 21 | 19 | 18 | 16 | 15 | 13 | 17 |
| 22 | 15 | 22 | 17 | 18 | 16 | 21 | 19 | 18 | 17 | 14 | 13 | 17 |
| 23 | 16 | 21 | 17 | 17 | 15 | 21 | 19 | 17 | 15 | 14 | 13 | 17 |
| 24 | 20 | 21 | 16 | 17 | 15 | 21 | 19 | 17 | 15 | 14 | 13 | 19 |
| 25 | 18 | 21 | 16 | 15 | 15 | 21 | 18 | 17 | 15 | 17 | 13 | 28 |
| 26 | 17 | 21 | 17 | 15 | 15 | 20 | 21 | 17 | 15 | 15 | 24 | 23 |
| 27 | 17 | 20 | 17 | 14 | 15 | 20 | 20 | 16 | 14 | 16 | 21 | 19 |
| 28 | 16 | 20 | 17 | 15 | 15 | 21 | 19 | 16 | 14 | 17 | 17 | 18 |
| 29 | 15 | 19 | 16 | 15 | --- | 22 | 19 | 17 | 16 | 15 | 15 | 19 |
| 30 | 15 | 19 | 16 | 15 | --- | 21 | 19 | 18 | 17 | 15 | 14 | 20 |
| 31 | 16 | --- | 17 | 15 | --- | 20 | --- | 17 | --- | 15 | 14 | --- |
| TOTAL | 485 | 664 | 541 | 492 | 487 | 629 | 600 | 588 | 474 | 509 | 465 | 499 |
| MEAN | 15.6 | 22.1 | 17.5 | 15.9 | 17.4 | 20.3 | 20.0 | 19.0 | 15.8 | 16.4 | 15.0 | 16.6 |
| MAX | 20 | 34 | 20 | 18 | 25 | 36 | 22 | 27 | 18 | 28 | 24 | 28 |
| MIN | 12 | 19 | 16 | 14 | 15 | 15 | 18 | 16 | 13 | 14 | 12 | 11 |
| CFSM | 1.07 | 1.51 | 1.20 | 1.09 | 1.19 | 1.39 | 1.37 | 1.30 | 1.08 | 1.12 | 1.03 | 1.14 |
| IN. | 1.24 | 1.69 | 1.38 | 1.25 | 1.24 | 1.60 | 1.53 | 1.50 | 1.21 | 1.30 | 1.18 | 1.27 |

CAL YR 1985 TOTAL 6282.2 MEAN 17.2 MAX 79 MIN 9.2 CFSM 1.18 IN 16.01
WTR YR 1986 TOTAL 6433.0 MEAN 17.6 MAX 36 MIN 11 CFSM 1.21 IN 16.39

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986.
TOTAL PHOSPHORUS DISCHARGE: October 1984 to June 1986.
TOTAL NITROGEN DISCHARGE: October 1984 to June 1986.
WATER TEMPERATURE: January 1985 to September 1986.
DISSOLVED OXYGEN: April 1984 to September 1986.

INSTRUMENTATION.--Water-quality sampler since December 1984. Continuous water temperature recorder since December 1984. Water-quality monitor since April 1984.

COOPERATION.--Water-sediment samples were collected by the U.S. Geological Survey; chemical analysis was performed by the Wisconsin State Laboratory of Hygiene; and suspended-sediment concentrations were determined by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 60 tons July 25, 1985; minimum daily, 0.48 ton June 20, 1985.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 377 lb July 25, 1985; minimum daily, 0.93 lb Feb. 19, 1986.
TOTAL NITROGEN DISCHARGE: Maximum daily, 1,340 lb July 25, 1985; minimum daily, 109 lb Dec. 7, 1984.
WATER TEMPERATURE: Maximum observed, 23°C July 25, 1985; minimum observed, 2.0°C Feb. 24, Dec. 17, 1985, Jan. 26, Mar. 19-20, 1986.
DISSOLVED OXYGEN: Maximum observed, 16.1 mg/L Feb. 21, 1986; minimum observed, 3.0 mg/L July 25, 1985.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 20 tons Nov. 1; minimum daily, 0.50 ton Mar. 27.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 110 lb Mar. 19; minimum daily, 0.93 lb Feb. 19.
TOTAL NITROGEN DISCHARGE: Maximum daily, 805 lb Mar. 19; minimum daily, 160 lb June 20.
WATER TEMPERATURE: Maximum observed, 19.5°C July 13; minimum observed, 2.0°C Dec. 17, Jan. 26, Mar. 19, 20.
DISSOLVED OXYGEN: Maximum observed, 16.1 mg/L Feb. 21; minimum observed, 4.9 mg/L June 22.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.8 | 20 | 1.7 | .89 | 1.4 | 1.6 | 1.3 | 1.6 | 1.1 | | | |
| 2 | 2.2 | 5.9 | 1.7 | .83 | 1.3 | 1.4 | 1.4 | 1.6 | 1.1 | | | |
| 3 | 2.6 | 1.8 | 1.7 | .77 | 1.4 | 1.2 | 1.5 | 1.6 | .99 | | | |
| 4 | 2.6 | 1.5 | 1.6 | .72 | 1.6 | 1.1 | 1.3 | 1.4 | .95 | | | |
| 5 | 1.3 | 1.5 | 1.7 | .70 | 3.0 | 1.0 | 1.1 | 1.5 | .92 | | | |
| 6 | 1.5 | 1.4 | 1.7 | .74 | 2.4 | .91 | 1.0 | 1.4 | .79 | | | |
| 7 | 1.6 | 1.4 | 1.7 | .81 | 1.4 | .82 | .90 | 1.3 | .92 | | | |
| 8 | 1.4 | 1.3 | 1.6 | .93 | 1.4 | .82 | .80 | 1.3 | 1.2 | | | |
| 9 | 1.5 | 1.3 | 1.6 | 1.1 | 1.2 | .88 | .74 | 1.3 | 1.3 | | | |
| 10 | 1.7 | 1.4 | 1.7 | 1.3 | 1.1 | 3.7 | .65 | 1.4 | 1.5 | | | |
| 11 | 1.6 | 1.4 | 1.7 | 1.5 | .95 | 3.1 | .66 | 1.4 | 1.6 | | | |
| 12 | 1.9 | 1.5 | 1.6 | 1.6 | .88 | 1.5 | .66 | 1.5 | 2.1 | | | |
| 13 | 1.8 | 1.7 | 1.6 | 1.5 | .82 | 1.0 | .65 | 1.6 | 2.1 | | | |
| 14 | 1.7 | 1.8 | 1.6 | 1.3 | .81 | 1.1 | 2.1 | 1.8 | 2.1 | | | |
| 15 | 1.7 | 1.7 | 1.6 | 1.1 | .84 | 1.1 | 2.1 | 2.0 | 2.1 | | | |
| 16 | 1.6 | 3.9 | 1.5 | 1.1 | .89 | 1.1 | .73 | 1.7 | 2.1 | | | |
| 17 | 1.6 | 1.6 | 1.5 | .95 | .97 | 1.5 | .72 | 3.2 | 1.9 | | | |
| 18 | 2.2 | 6.1 | 1.5 | .86 | 1.0 | 8.1 | .73 | 2.7 | 1.8 | | | |
| 19 | 1.9 | 6.4 | 1.4 | .81 | .93 | 7.8 | .75 | 1.5 | 1.8 | | | |
| 20 | 2.3 | 3.2 | 1.4 | .91 | .60 | 1.5 | .80 | 1.3 | 1.5 | | | |
| 21 | 2.4 | 2.3 | 1.4 | 1.1 | .65 | .61 | .82 | 1.3 | 1.8 | | | |
| 22 | 2.5 | 1.8 | 1.4 | 1.4 | .81 | .56 | .89 | 1.3 | 2.0 | | | |
| 23 | 3.0 | 1.7 | 1.4 | 1.7 | .88 | .57 | .92 | 1.4 | 2.0 | | | |
| 24 | 4.2 | 1.7 | 1.3 | 1.8 | 1.0 | .57 | 1.0 | 1.4 | 2.2 | | | |
| 25 | 4.1 | 1.7 | 1.2 | 1.5 | 1.2 | .57 | 1.0 | 1.5 | 2.5 | | | |
| 26 | 4.5 | 1.7 | 1.2 | 1.4 | 1.4 | .52 | 1.8 | 1.4 | 2.7 | | | |
| 27 | 4.6 | 1.7 | 1.2 | 1.2 | 1.6 | .50 | 1.3 | 1.3 | 2.3 | | | |
| 28 | 3.7 | 1.7 | 1.2 | 1.4 | 1.8 | .63 | 1.3 | 1.2 | 2.1 | | | |
| 29 | 3.0 | 1.6 | 1.1 | 1.4 | --- | .76 | 1.3 | 1.2 | 2.3 | | | |
| 30 | 2.5 | 1.6 | 1.0 | 1.3 | --- | .89 | 1.4 | 1.3 | 2.2 | | | |
| 31 | 2.9 | --- | 1.0 | 1.4 | --- | 1.0 | --- | 1.2 | --- | | | |
| TOTAL | 73.9 | 84.3 | 45.5 | 36.02 | 34.23 | 48.41 | 32.32 | 47.6 | 51.97 | | | |

WTR YR 1986 TOTAL 454.25

## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.13 | 101 | 8.02 | 1.92 | 1.59 | 1.25 | 4.51 | 4.08 | 4.81 | | | |
| 2 | 2.98 | 84.00 | 4.35 | 1.90 | 1.51 | 1.29 | 4.29 | 4.13 | 4.68 | | | |
| 3 | 2.68 | 18.00 | 4.16 | 1.87 | 1.54 | 1.33 | 4.58 | 4.09 | 4.56 | | | |
| 4 | 2.95 | 6.08 | 3.96 | 1.85 | 1.54 | 1.41 | 4.34 | 3.83 | 4.58 | | | |
| 5 | 3.23 | 5.58 | 3.79 | 1.87 | 8.07 | 1.51 | 4.25 | 4.04 | 4.57 | | | |
| 6 | 3.02 | 5.43 | 3.64 | 1.79 | 1.62 | 1.56 | 4.24 | 3.82 | 4.04 | | | |
| 7 | 3.15 | 5.55 | 3.48 | 1.67 | 1.65 | 1.59 | 4.18 | 3.70 | 4.71 | | | |
| 8 | 2.86 | 4.92 | 3.20 | 1.65 | 1.65 | 1.62 | 4.07 | 3.64 | 5.20 | | | |
| 9 | 3.07 | 4.97 | 3.03 | 1.70 | 1.52 | 1.84 | 4.17 | 3.74 | 5.09 | | | |
| 10 | 3.46 | 4.89 | 2.90 | 1.72 | 1.35 | 32.00 | 4.03 | 3.76 | 4.87 | | | |
| 11 | 3.35 | 4.81 | 2.79 | 1.70 | 1.23 | 18.00 | 6.08 | 3.78 | 4.50 | | | |
| 12 | 5.02 | 4.73 | 2.71 | 1.66 | 1.18 | 6.33 | 4.31 | 3.80 | 5.14 | | | |
| 13 | 3.63 | 5.09 | 2.65 | 1.66 | 1.13 | 5.16 | 4.20 | 3.91 | 4.79 | | | |
| 14 | 3.41 | 5.24 | 2.53 | 1.63 | 1.12 | 5.49 | 4.56 | 4.43 | 4.71 | | | |
| 15 | 3.42 | 4.94 | 2.50 | 1.56 | 1.07 | 5.40 | 4.53 | 4.75 | 4.96 | | | |
| 16 | 3.24 | 18.00 | 2.47 | 1.60 | 1.03 | 5.63 | 4.57 | 4.85 | 4.96 | | | |
| 17 | 3.19 | 4.50 | 2.44 | 1.57 | 1.04 | 12.00 | 4.29 | 40.00 | 4.69 | | | |
| 18 | 3.30 | 28.00 | 2.36 | 1.59 | .98 | 90.00 | 4.36 | 22.00 | 4.52 | | | |
| 19 | 3.49 | 26.00 | 2.24 | 1.62 | .93 | 110 | 4.17 | 6.78 | 4.54 | | | |
| 20 | 5.02 | 9.71 | 2.21 | 1.60 | .95 | 21.00 | 4.18 | 5.19 | 3.94 | | | |
| 21 | 3.58 | 8.05 | 2.24 | 1.58 | .99 | 5.08 | 4.02 | 4.95 | 4.74 | | | |
| 22 | 3.25 | 7.57 | 2.30 | 1.65 | 1.08 | 4.44 | 4.05 | 4.79 | 5.30 | | | |
| 23 | 3.47 | 6.99 | 2.27 | 1.58 | 1.04 | 4.52 | 3.90 | 4.66 | 4.67 | | | |
| 24 | 8.02 | 6.76 | 2.17 | 1.47 | 1.08 | 4.55 | 3.94 | 4.67 | 4.50 | | | |
| 25 | 5.02 | 6.52 | 2.09 | 1.32 | 1.11 | 4.55 | 3.74 | 4.77 | 4.46 | | | |
| 26 | 3.67 | 6.10 | 2.13 | 1.28 | 1.14 | 4.35 | 7.16 | 4.79 | 4.41 | | | |
| 27 | 3.62 | 5.61 | 2.16 | 1.23 | 1.18 | 4.31 | 4.18 | 4.57 | 4.04 | | | |
| 28 | 3.37 | 5.38 | 2.14 | 1.54 | 1.22 | 4.59 | 4.03 | 4.46 | 3.87 | | | |
| 29 | 3.24 | 4.94 | 1.99 | 1.65 | --- | 4.62 | 3.84 | 4.64 | 4.50 | | | |
| 30 | 3.24 | 4.69 | 1.99 | 1.59 | --- | 4.57 | 3.96 | 5.19 | 4.55 | | | |
| 31 | 5.79 | --- | 2.06 | 1.61 | --- | 4.37 | --- | 4.86 | --- | | | |
| TOTAL | 113.87 | 414.05 | 88.97 | 50.63 | 41.54 | 374.36 | 130.73 | 190.67 | 138.90 | | | |

WTR YR 1986 TOTAL 1543.72

### NITROGEN, TOTAL, LOAD POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 196 | 650 | 292 | 233 | 292 | 231 | 288 | 276 | 205 | | | |
| 2 | 186 | 561 | 261 | 233 | 281 | 233 | 275 | 280 | 199 | | | |
| 3 | 168 | 311 | 262 | 233 | 292 | 234 | 294 | 278 | 194 | | | |
| 4 | 184 | 258 | 262 | 233 | 295 | 241 | 279 | 260 | 194 | | | |
| 5 | 203 | 263 | 264 | 238 | 338 | 252 | 273 | 289 | 193 | | | |
| 6 | 189 | 262 | 266 | 231 | 320 | 254 | 274 | 261 | 170 | | | |
| 7 | 197 | 330 | 268 | 219 | 329 | 253 | 270 | 253 | 198 | | | |
| 8 | 179 | 248 | 259 | 219 | 335 | 251 | 264 | 247 | 244 | | | |
| 9 | 192 | 256 | 258 | 227 | 312 | 260 | 314 | 251 | 213 | | | |
| 10 | 216 | 258 | 260 | 233 | 282 | 391 | 262 | 250 | 203 | | | |
| 11 | 210 | 259 | 262 | 233 | 261 | 421 | 314 | 248 | 187 | | | |
| 12 | 256 | 261 | 259 | 230 | 254 | 315 | 281 | 247 | 223 | | | |
| 13 | 227 | 287 | 257 | 233 | 247 | 258 | 274 | 252 | 199 | | | |
| 14 | 213 | 302 | 248 | 232 | 248 | 274 | 362 | 312 | 195 | | | |
| 15 | 214 | 292 | 248 | 225 | 240 | 270 | 297 | 336 | 205 | | | |
| 16 | 203 | 369 | 248 | 233 | 235 | 281 | 300 | 274 | 204 | | | |
| 17 | 200 | 277 | 248 | 233 | 239 | 332 | 282 | 495 | 192 | | | |
| 18 | 206 | 367 | 243 | 240 | 230 | 686 | 288 | 395 | 185 | | | |
| 19 | 218 | 392 | 233 | 248 | 219 | 805 | 275 | 273 | 185 | | | |
| 20 | 256 | 301 | 233 | 248 | 220 | 377 | 277 | 228 | 160 | | | |
| 21 | 224 | 277 | 239 | 248 | 223 | 282 | 267 | 217 | 192 | | | |
| 22 | 203 | 274 | 248 | 262 | 237 | 278 | 269 | 209 | 222 | | | |
| 23 | 217 | 266 | 248 | 255 | 224 | 284 | 259 | 203 | 189 | | | |
| 24 | 292 | 270 | 240 | 241 | 225 | 286 | 263 | 203 | 182 | | | |
| 25 | 238 | 274 | 233 | 219 | 226 | 286 | 250 | 207 | 184 | | | |
| 26 | 230 | 270 | 241 | 216 | 228 | 275 | 312 | 207 | 185 | | | |
| 27 | 226 | 261 | 248 | 211 | 229 | 273 | 280 | 197 | 173 | | | |
| 28 | 211 | 263 | 248 | 267 | 230 | 291 | 271 | 192 | 170 | | | |
| 29 | 203 | 254 | 234 | 291 | --- | 362 | 259 | 199 | 201 | | | |
| 30 | 203 | 254 | 236 | 283 | --- | 291 | 267 | 222 | 222 | | | |
| 31 | 223 | --- | 247 | 292 | --- | 278 | --- | 208 | --- | | | |
| TOTAL | 6583 | 9167 | 7793 | 7439 | 7291 | 9805 | 8440 | 7969 | 5868 | | | |

WTR YR 1986 TOTAL 70355

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 11.5 | 9.5 | 10.5 | 10.5 | 9.5 | 10.0 | 6.0 | 3.5 | 4.5 | 6.0 | 4.0 | 5.0 |
| 2 | 13.0 | 9.0 | 10.5 | 9.5 | 8.5 | 9.0 | 4.0 | 2.5 | 3.5 | 6.0 | 4.0 | 5.0 |
| 3 | 13.0 | 10.0 | 11.0 | 8.5 | 8.0 | 8.5 | 5.0 | 3.0 | 4.0 | 6.5 | 4.5 | 5.5 |
| 4 | 15.5 | 9.5 | 11.0 | 10.0 | 8.0 | 9.0 | 6.0 | 4.5 | 5.0 | 5.5 | 4.0 | 5.0 |
| 5 | 11.0 | 9.5 | 10.5 | 9.0 | 7.5 | 8.5 | 6.0 | 4.5 | 5.5 | 5.0 | 3.5 | 4.0 |
| 6 | 12.0 | 8.5 | 10.0 | 9.5 | 8.5 | 9.0 | 6.0 | 4.0 | 4.5 | 5.0 | 3.0 | 3.5 |
| 7 | 12.0 | 9.0 | 10.5 | 10.0 | 8.0 | 8.5 | 6.0 | 5.0 | 5.0 | 4.5 | 2.5 | 3.5 |
| 8 | 12.0 | 10.5 | 11.5 | 9.5 | 7.0 | 8.0 | 6.0 | 4.5 | 5.5 | 5.0 | 3.0 | 3.5 |
| 9 | 11.5 | 9.5 | 10.0 | 7.5 | 6.5 | 7.0 | 6.5 | 5.0 | 5.5 | 5.5 | 3.5 | 4.5 |
| 10 | 10.5 | 9.0 | 9.5 | 7.5 | 6.5 | 6.5 | 6.5 | 5.5 | 5.5 | 6.5 | 4.5 | 5.5 |
| 11 | 11.0 | 8.0 | 9.5 | 7.5 | 6.0 | 7.0 | 5.5 | 4.0 | 5.0 | 7.0 | 5.0 | 6.0 |
| 12 | 12.0 | 10.0 | 11.0 | 8.0 | 7.5 | 8.0 | 5.0 | 3.0 | 4.0 | 5.5 | 3.0 | 4.0 |
| 13 | 13.0 | 10.0 | 11.0 | 8.0 | 7.0 | 7.5 | 4.5 | 3.0 | 3.5 | 5.5 | 3.0 | 4.5 |
| 14 | 11.5 | 9.5 | 10.5 | 7.0 | 6.5 | 7.0 | 5.0 | 3.5 | 4.5 | 6.0 | 4.0 | 5.0 |
| 15 | 12.0 | 9.5 | 10.5 | 7.5 | 6.5 | 7.0 | 4.5 | 4.0 | 4.0 | 6.0 | 4.0 | 4.5 |
| 16 | 11.5 | 8.0 | 10.0 | 7.0 | 6.5 | 6.5 | 4.0 | 3.0 | 3.5 | 7.0 | 4.5 | 5.5 |
| 17 | 11.5 | 8.0 | 10.0 | 9.0 | 6.5 | 7.5 | 4.5 | 2.0 | 3.0 | 7.5 | 5.5 | 6.5 |
| 18 | 11.5 | 10.5 | 11.0 | 10.0 | 8.0 | 9.0 | 4.0 | 2.0 | 3.5 | 7.0 | 6.0 | 6.5 |
| 19 | 11.5 | 10.0 | 11.0 | 10.0 | 6.5 | 8.5 | --- | --- | --- | 7.0 | 5.5 | 6.0 |
| 20 | 11.0 | 10.5 | 11.0 | 6.5 | 5.0 | 5.5 | --- | --- | --- | 6.5 | 5.5 | 6.0 |
| 21 | 11.5 | 10.5 | 11.0 | 7.0 | 5.0 | 6.0 | --- | --- | --- | 7.0 | 5.5 | 6.0 |
| 22 | 12.0 | 10.5 | 11.0 | 7.0 | 6.0 | 6.5 | --- | --- | --- | 6.5 | 4.5 | 5.5 |
| 23 | 12.0 | 11.0 | 11.5 | 7.0 | 5.0 | 6.0 | --- | --- | --- | 6.5 | 4.0 | 5.0 |
| 24 | 13.0 | 10.0 | 11.5 | 6.0 | 4.5 | 5.0 | --- | --- | --- | 6.0 | 5.0 | 5.5 |
| 25 | 12.0 | 9.0 | 10.0 | 6.5 | 5.0 | 6.0 | --- | --- | --- | 6.5 | 4.5 | 5.5 |
| 26 | 12.5 | 9.5 | 11.0 | 7.0 | 5.5 | 6.5 | --- | --- | --- | 5.0 | 2.0 | 3.5 |
| 27 | 11.5 | 9.0 | 10.5 | 6.0 | 5.5 | 5.5 | --- | --- | --- | 5.5 | 2.5 | 3.5 |
| 28 | 11.0 | 8.5 | 9.5 | 6.5 | 5.0 | 6.0 | -- | --- | --- | 4.5 | 3.0 | 4.0 |
| 29 | 11.0 | 9.0 | 10.0 | 5.5 | 4.5 | 5.0 | --- | --- | --- | 4.5 | 3.5 | 3.5 |
| 30 | 11.5 | 8.5 | 9.5 | 6.5 | 5.0 | 6.0 | --- | --- | --- | 5.5 | 3.5 | 4.5 |
| 31 | 11.0 | 8.5 | 9.5 | --- | --- | --- | --- | --- | --- | 5.5 | 4.5 | 5.0 |
| MONTH | 15.5 | 8.0 | 10.5 | 10.5 | 4.5 | 7.0 | 6.5 | 2.0 | 4.5 | 7.5 | 2.0 | 5.0 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | 6.5 | 5.0 | 6.0 | 8.5 | 4.5 | 6.0 | 13.0 | 9.0 | 11.0 | 12.0 | 10.5 | 11.5 |
| 2 | 7.0 | 6.0 | 6.5 | 8.5 | 5.5 | 6.5 | 13.0 | 8.0 | 10.0 | 13.0 | 10.0 | 11.0 |
| 3 | 6.5 | 6.0 | 6.5 | 9.0 | 5.5 | 7.0 | 9.0 | 8.5 | 8.5 | 13.5 | 9.5 | 11.5 |
| 4 | 6.5 | 4.5 | 5.5 | 8.0 | 4.0 | 6.5 | 11.0 | 8.5 | 9.5 | 14.0 | 10.5 | 12.0 |
| 5 | 5.5 | 4.5 | 5.0 | 7.0 | 5.0 | 5.5 | 13.0 | 9.0 | 10.5 | 14.5 | 11.0 | 12.5 |
| 6 | 5.5 | 4.0 | 5.0 | 7.0 | 3.0 | 5.0 | 10.5 | 9.5 | 10.0 | 15.5 | 11.5 | 13.5 |
| 7 | 6.0 | 4.0 | 4.5 | 7.0 | 2.5 | 4.5 | 14.0 | 8.5 | 10.5 | 14.0 | 10.5 | 12.5 |
| 8 | 5.5 | 3.0 | 4.5 | 6.5 | 4.5 | 5.5 | 10.5 | 8.0 | 9.5 | 14.5 | 10.5 | 12.0 |
| 9 | 5.0 | 2.5 | 3.5 | 7.5 | 5.5 | 7.0 | 12.0 | 7.5 | 9.5 | 14.5 | 10.5 | 12.5 |
| 10 | 5.0 | 3.0 | 3.5 | 7.0 | 2.5 | 4.5 | 12.5 | 7.5 | 9.5 | 14.5 | 11.0 | 12.5 |
| 11 | 6.0 | 3.0 | 4.0 | 6.5 | 3.0 | 4.5 | 12.0 | 7.5 | 10.0 | 12.5 | 11.5 | 12.0 |
| 12 | 5.5 | 3.0 | 4.0 | 6.0 | 3.5 | 4.5 | 9.5 | 9.0 | 9.0 | 13.5 | 11.5 | 12.5 |
| 13 | 5.0 | 2.5 | 4.0 | 6.5 | 5.0 | 5.5 | 11.0 | 8.5 | 9.5 | 13.0 | 11.0 | 12.0 |
| 14 | 6.5 | 3.5 | 5.0 | 6.0 | 5.0 | 5.5 | 9.0 | 8.0 | 8.5 | 14.0 | 10.5 | 12.0 |
| 15 | 6.0 | 3.5 | 4.5 | 6.5 | 5.0 | 5.5 | 9.5 | 8.0 | 8.5 | 13.0 | 12.0 | 12.5 |
| 16 | 6.0 | 4.5 | 5.5 | 8.0 | 5.0 | 6.0 | 11.0 | 8.5 | 9.5 | 14.5 | 12.0 | 13.0 |
| 17 | 7.0 | 5.5 | 6.0 | 7.0 | 4.5 | 5.5 | 11.5 | 8.5 | 9.5 | 13.5 | 12.5 | 13.0 |
| 18 | 7.0 | 6.0 | 6.5 | 4.5 | 3.5 | 4.0 | 11.5 | 8.5 | 10.0 | 15.5 | 11.5 | 13.5 |
| 19 | 7.0 | 6.0 | 6.5 | 6.0 | 2.0 | 4.0 | 11.5 | 10.0 | 10.5 | 13.0 | 11.0 | 12.0 |
| 20 | 6.5 | 4.0 | 5.5 | 6.5 | 2.0 | 4.0 | 12.0 | 9.5 | 10.5 | 15.0 | 9.5 | 12.0 |
| 21 | 7.0 | 3.5 | 5.0 | 8.5 | 4.0 | 6.0 | 10.5 | 9.0 | 9.5 | 15.0 | 10.0 | 12.5 |
| 22 | 6.0 | 4.5 | 5.0 | 9.0 | 5.0 | 7.0 | 11.5 | 8.5 | 10.0 | 12.5 | 10.5 | 11.5 |
| 23 | 7.0 | 4.0 | 5.5 | 10.5 | 5.5 | 7.5 | 12.0 | 9.0 | 10.5 | 14.5 | 10.0 | 12.0 |
| 24 | 8.0 | 4.0 | 6.0 | 9.0 | 5.0 | 7.0 | 13.5 | 10.0 | 11.5 | 13.5 | 11.0 | 12.0 |
| 25 | 7.5 | 4.0 | 5.5 | 12.0 | 7.0 | 9.5 | 14.0 | 11.0 | 12.0 | 15.5 | 11.0 | 13.0 |
| 26 | 7.0 | 5.0 | 6.0 | 11.5 | 7.5 | 9.5 | 15.0 | 11.5 | 13.0 | 14.5 | 12.0 | 13.0 |
| 27 | 8.0 | 4.0 | 6.0 | 11.5 | 6.5 | 8.5 | 15.5 | 12.0 | 13.5 | 13.5 | 12.0 | 13.0 |
| 28 | 7.0 | 3.5 | 5.0 | 13.0 | 7.5 | 10.0 | 13.5 | 11.0 | 12.0 | 15.0 | 12.5 | 13.5 |
| 29 | --- | --- | --- | 14.0 | 9.0 | 11.5 | 13.5 | 10.0 | 12.0 | 15.5 | 12.5 | 14.0 |
| 30 | --- | --- | --- | 13.0 | 9.5 | 11.0 | 13.0 | 11.5 | 12.0 | 18.0 | 13.5 | 15.5 |
| 31 | --- | --- | --- | 14.0 | 9.0 | 11.5 | --- | --- | --- | 18.0 | 14.0 | 15.5 |
| MONTH | 8.0 | 2.5 | 5.0 | 14.0 | 2.0 | 6.5 | 15.5 | 7.5 | 10.5 | 18.0 | 9.5 | 12.5 |

## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 16.0 | 13.5 | 15.0 | 13.5 | 12.5 | 13.0 | 17.5 | 15.0 | 16.0 | 14.5 | 11.5 | 12.5 |
| 2 | 15.5 | 12.0 | 13.5 | 15.0 | 12.5 | 14.0 | 17.5 | 14.5 | 16.0 | 14.5 | 10.5 | 12.0 |
| 3 | 16.0 | 11.5 | 13.5 | 15.5 | 12.5 | 14.0 | 17.0 | 13.5 | 15.5 | 13.0 | 11.0 | 11.5 |
| 4 | 16.5 | 12.5 | 14.5 | 16.5 | 13.5 | 15.0 | 17.0 | 13.5 | 15.0 | 15.0 | 11.0 | 12.5 |
| 5 | 14.5 | 12.5 | 13.5 | 18.0 | 15.0 | 16.5 | 15.5 | 13.5 | 14.5 | 13.5 | 10.0 | 11.5 |
| 6 | 13.0 | 11.5 | 12.0 | 17.0 | 15.5 | 16.5 | 14.5 | 14.0 | 14.0 | 12.5 | 10.0 | 11.0 |
| 7 | 15.5 | 11.5 | 13.0 | 16.0 | 14.5 | 15.0 | 16.0 | 13.5 | 14.5 | 14.0 | 10.0 | 11.5 |
| 8 | 16.5 | 13.0 | 14.5 | 17.5 | 13.5 | 15.5 | 16.5 | 12.0 | 14.0 | 14.5 | 10.0 | 12.0 |
| 9 | 16.0 | 12.5 | 14.0 | 18.0 | 15.5 | 16.5 | 17.0 | 12.0 | 14.5 | 12.5 | 11.0 | 11.5 |
| 10 | 14.5 | 12.5 | 13.5 | 16.0 | 14.0 | 15.0 | 17.0 | 14.5 | 15.5 | 14.0 | 12.0 | 13.0 |
| 11 | 15.5 | 12.0 | 13.5 | 18.0 | 15.5 | 16.5 | 16.0 | 13.5 | 14.5 | 15.5 | 14.0 | 15.0 |
| 12 | 14.5 | 12.5 | 13.0 | 19.0 | 16.0 | 17.5 | 16.0 | 12.5 | 14.0 | 15.5 | 13.0 | 14.0 |
| 13 | 14.0 | 11.5 | 12.5 | 19.5 | 16.0 | 17.5 | 14.0 | 13.0 | 13.5 | 14.5 | 12.0 | 13.0 |
| 14 | 12.0 | 11.0 | 11.5 | 18.0 | 15.0 | 16.5 | 16.0 | 13.5 | 14.5 | 12.5 | 12.0 | 12.5 |
| 15 | 12.5 | 11.0 | 11.5 | 17.0 | 15.0 | 16.0 | 17.0 | 14.0 | 15.5 | 12.5 | 11.5 | 12.0 |
| 16 | 15.5 | 11.5 | 13.5 | 17.0 | 14.0 | 15.5 | 17.5 | 13.5 | 15.5 | 14.0 | 10.5 | 12.0 |
| 17 | 14.5 | 11.5 | 13.0 | 19.0 | 14.5 | 16.5 | 17.0 | 14.0 | 15.5 | 12.0 | 11.0 | 11.5 |
| 18 | 15.0 | 12.0 | 13.5 | 19.0 | 16.5 | 17.5 | 16.0 | 13.5 | 15.0 | 14.0 | 12.0 | 12.5 |
| 19 | 16.0 | 13.0 | 14.5 | 18.0 | 16.0 | 17.0 | 16.0 | 13.0 | 14.5 | 13.5 | 12.5 | 13.0 |
| 20 | 14.5 | 12.5 | 13.5 | 17.0 | 15.0 | 16.0 | 15.5 | 12.5 | 14.0 | 13.0 | 12.5 | 12.5 |
| 21 | 17.0 | 12.5 | 14.5 | 16.0 | 14.0 | 15.0 | 17.0 | 13.5 | 15.0 | 14.5 | 12.5 | 13.5 |
| 22 | 16.0 | 14.5 | 15.0 | 16.5 | 13.5 | 15.0 | 16.0 | 12.5 | 14.0 | 15.5 | 13.0 | 14.0 |
| 23 | 16.5 | 13.0 | 15.0 | 16.5 | 13.5 | 15.0 | 16.0 | 13.5 | 14.5 | 16.0 | 14.0 | 14.5 |
| 24 | 15.0 | 13.5 | 14.0 | 17.5 | 14.5 | 15.5 | 16.0 | 12.0 | 13.5 | 15.5 | 13.5 | 14.5 |
| 25 | 15.0 | 12.0 | 13.5 | 17.0 | 15.0 | 16.0 | 16.5 | 12.5 | 14.5 | 18.5 | 15.5 | 17.0 |
| 26 | 17.0 | 13.0 | 15.0 | 16.5 | 14.5 | 15.5 | 17.0 | 13.5 | 15.0 | 18.5 | 16.0 | 17.0 |
| 27 | 16.0 | 14.5 | 15.5 | 16.5 | 14.0 | 15.5 | 15.0 | 12.5 | 14.0 | 18.5 | 16.0 | 17.0 |
| 28 | 15.5 | 12.5 | 14.0 | 17.5 | 15.0 | 16.0 | 15.0 | 11.0 | 13.0 | 17.0 | 15.0 | 15.5 |
| 29 | 16.5 | 14.0 | 15.0 | 18.0 | 14.0 | 16.0 | 14.5 | 11.0 | 12.5 | 16.0 | 15.0 | 15.5 |
| 30 | 15.0 | 13.5 | 14.0 | 17.0 | 14.5 | 15.5 | 14.0 | 11.5 | 12.5 | 15.0 | 13.5 | 14.5 |
| 31 | --- | --- | --- | 19.0 | 14.0 | 16.5 | 15.5 | 11.5 | 13.0 | --- | --- | --- |
| MONTH | 17.0 | 11.0 | 14.0 | 19.5 | 12.5 | 16.0 | 17.5 | 11.0 | 14.5 | 18.5 | 10.0 | 13.5 |
| YEAR | 19.5 | 2.0 | 10.0 | | | | | | | | | |

### OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | --- | --- | --- | 10.0 | 8.8 | 9.2 | | | | | | |
| 2 | --- | --- | --- | 10.8 | 9.5 | 10.1 | | | | | | |
| 3 | --- | --- | --- | --- | --- | --- | | | | | | |
| 4 | --- | --- | --- | --- | --- | --- | | | | | | |
| 5 | 10.0 | 7.7 | 8.7 | --- | --- | --- | | | | | | |
| 6 | 11.1 | 8.4 | 9.4 | 11.2 | 8.2 | 9.5 | | | | | | |
| 7 | 12.3 | 8.2 | 9.6 | 10.6 | 8.3 | 9.1 | | | | | | |
| 8 | 10.4 | 8.1 | 9.1 | 10.6 | 8.6 | 9.2 | | | | | | |
| 9 | 9.8 | 8.6 | 9.2 | 10.2 | 8.8 | 9.4 | | | | | | |
| 10 | 10.9 | 8.2 | 9.0 | 11.5 | 9.5 | 10.1 | | | | | | |
| 11 | 11.2 | 8.1 | 9.4 | 11.5 | 8.9 | 9.9 | | | | | | |
| 12 | 8.6 | 7.2 | 7.9 | 10.2 | 8.6 | 9.2 | | | | | | |
| 13 | 10.6 | 7.8 | 8.9 | 10.7 | 8.7 | 9.2 | | | | | | |
| 14 | 10.5 | 8.2 | 9.0 | 10.4 | 8.7 | 9.4 | | | | | | |
| 15 | 11.5 | 8.6 | 9.7 | 10.9 | 9.0 | 9.6 | | | | | | |
| 16 | 12.0 | 9.0 | 10.1 | 9.6 | 8.4 | 9.0 | | | | | | |
| 17 | 12.8 | 9.1 | 10.3 | 10.8 | 8.5 | 9.4 | | | | | | |
| 18 | 10.8 | 9.0 | 9.9 | 8.8 | 7.9 | 8.4 | | | | | | |
| 19 | 12.3 | 9.0 | 10.0 | 9.7 | 8.1 | 8.8 | | | | | | |
| 20 | 11.5 | 9.0 | 9.9 | 11.5 | 9.1 | 10.2 | | | | | | |
| 21 | 11.4 | 8.7 | 9.7 | 11.7 | 9.7 | 10.4 | | | | | | |
| 22 | 11.9 | 8.7 | 9.7 | 11.0 | 9.7 | 10.1 | | | | | | |
| 23 | 11.0 | 7.9 | 9.2 | 11.5 | 9.9 | 10.5 | | | | | | |
| 24 | 11.0 | 8.0 | 9.2 | 12.4 | 10.4 | 11.0 | | | | | | |
| 25 | 12.0 | 8.6 | 9.9 | 11.4 | 10.0 | 10.6 | | | | | | |
| 26 | 11.7 | 8.3 | 9.6 | 11.7 | 9.9 | 10.5 | | | | | | |
| 27 | 11.8 | 8.4 | 9.6 | --- | --- | --- | | | | | | |
| 28 | 12.2 | 8.8 | 10.0 | --- | --- | --- | | | | | | |
| 29 | 12.0 | 8.8 | 9.9 | --- | --- | --- | | | | | | |
| 30 | --- | --- | --- | --- | --- | --- | | | | | | |
| 31 | 12.4 | 8.9 | 9.9 | --- | --- | --- | | | | | | |
| MONTH | 12.8 | 7.2 | 9.5 | 12.4 | 7.9 | 9.7 | | | | | | |

## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

### OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | --- | --- | --- | 14.5 | 9.0 | 11.0 | 13.9 | 7.9 | 10.0 | 13.3 | 7.6 | 10.1 |
| 2 | --- | --- | --- | 14.9 | 9.0 | 10.8 | 14.1 | 8.4 | 10.5 | 14.3 | 8.3 | 10.7 |
| 3 | --- | --- | --- | 14.9 | 9.0 | 10.8 | 10.0 | 8.5 | 9.1 | 14.6 | 7.9 | 10.8 |
| 4 | --- | --- | --- | 14.6 | 9.0 | 10.8 | 14.0 | 8.5 | 10.2 | 14.8 | 7.3 | 10.5 |
| 5 | --- | --- | --- | 13.8 | 9.2 | 10.7 | 14.0 | 8.1 | 10.0 | 14.1 | 7.2 | 9.6 |
| 6 | --- | --- | --- | 15.3 | 9.7 | 11.7 | 12.3 | 8.1 | 9.6 | 14.8 | 7.2 | 10.2 |
| 7 | --- | --- | --- | 15.7 | 10.4 | 12.6 | 13.9 | 8.1 | 10.5 | 14.5 | 7.3 | 10.3 |
| 8 | --- | --- | --- | --- | --- | --- | 12.4 | 8.2 | 10.0 | 14.8 | 7.3 | 10.5 |
| 9 | --- | --- | --- | --- | --- | --- | 13.6 | 8.4 | 10.6 | 14.7 | 7.2 | 10.3 |
| 10 | --- | --- | --- | --- | --- | --- | 13.5 | 8.1 | 10.4 | 14.7 | 7.0 | 10.2 |
| 11 | --- | --- | --- | 12.6 | 10.2 | 11.2 | 13.7 | 8.2 | 10.2 | 12.4 | 7.1 | 8.9 |
| 12 | --- | --- | --- | 12.8 | 10.2 | 11.1 | 12.4 | 8.4 | 9.8 | 13.1 | 7.3 | 9.4 |
| 13 | --- | --- | --- | 12.9 | 9.8 | 10.8 | 14.2 | 8.5 | 10.6 | 13.3 | 6.8 | 8.8 |
| 14 | 14.8 | 9.3 | 10.9 | 12.8 | 9.8 | 10.7 | 10.0 | 8.6 | 9.2 | 11.3 | 6.6 | 8.7 |
| 15 | 13.4 | 9.1 | 10.4 | 13.3 | 9.6 | 10.7 | 13.8 | 8.9 | 10.7 | 10.2 | 7.0 | 8.3 |
| 16 | 13.3 | 8.9 | 10.3 | 13.8 | 9.5 | 10.7 | 14.3 | 8.8 | 10.6 | 13.0 | 7.1 | 9.3 |
| 17 | 13.6 | 8.7 | 10.2 | 12.8 | 9.4 | 10.6 | 14.6 | 8.5 | 11.0 | 8.3 | 6.4 | 7.3 |
| 18 | 13.7 | 8.7 | 10.3 | 10.3 | 9.5 | 9.9 | 14.7 | 8.4 | 10.6 | 10.5 | 7.3 | 8.5 |
| 19 | 14.4 | 9.0 | 10.7 | 10.7 | 9.5 | 10.1 | 14.5 | 8.3 | 10.7 | 11.2 | 7.5 | 9.1 |
| 20 | 15.1 | 9.2 | 11.1 | 12.0 | 9.6 | 10.7 | 14.6 | 8.2 | 10.6 | 12.9 | 7.7 | 10.0 |
| 21 | 16.1 | 10.1 | 12.0 | 12.8 | 9.6 | 10.8 | 14.4 | 8.3 | 10.9 | 13.0 | 7.5 | 9.8 |
| 22 | 14.9 | 10.1 | 11.6 | 13.1 | 8.9 | 10.7 | 15.1 | 8.3 | 11.3 | 11.8 | 7.5 | 9.3 |
| 23 | 16.1 | 9.8 | 11.9 | 13.3 | 9.0 | 10.6 | 15.5 | 7.9 | 11.1 | 12.7 | 7.5 | 9.8 |
| 24 | 15.7 | 9.7 | 11.6 | 13.6 | 9.1 | 10.8 | 15.8 | 7.4 | 10.8 | 12.2 | 7.5 | 9.4 |
| 25 | 16.0 | 9.7 | 11.8 | 13.9 | 8.1 | 10.3 | 14.9 | 7.2 | 10.0 | 13.0 | 7.0 | 9.6 |
| 26 | 14.4 | 9.5 | 11.0 | 14.0 | 8.2 | 10.3 | 13.7 | 7.0 | 9.5 | 12.4 | 7.0 | 8.8 |
| 27 | 15.8 | 9.6 | 11.8 | 14.2 | 8.7 | 10.7 | 14.9 | 7.1 | 10.1 | 11.6 | 7.0 | 8.9 |
| 28 | 14.7 | 9.3 | 11.4 | 14.1 | 8.2 | 10.5 | 13.0 | 7.1 | 9.3 | 12.8 | 7.3 | 9.3 |
| 29 | --- | --- | --- | 14.1 | 7.8 | 10.2 | 14.4 | 7.4 | 10.4 | 13.4 | 6.7 | 9.4 |
| 30 | --- | --- | --- | 14.2 | 7.8 | 10.3 | 12.6 | 7.4 | 9.4 | 13.0 | 6.5 | 9.3 |
| 31 | --- | --- | --- | 14.0 | 7.8 | 10.3 | --- | --- | --- | 12.9 | 6.2 | 9.1 |
| MONTH | 16.1 | 8.7 | 11.1 | 15.7 | 7.8 | 10.7 | 15.8 | 7.0 | 10.3 | 14.8 | 6.2 | 9.5 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 11.5 | 6.1 | 8.7 | 10.4 | 6.6 | 8.2 | 10.5 | 6.7 | 8.3 | 9.7 | 8.3 | 8.9 |
| 2 | 13.2 | 6.8 | 9.6 | 11.8 | 6.7 | 8.8 | 10.3 | 6.8 | 8.3 | 9.7 | 8.1 | 8.7 |
| 3 | 13.1 | 6.8 | 9.6 | 12.3 | 6.5 | 8.9 | 11.0 | 7.1 | 8.6 | 8.7 | 7.0 | 8.1 |
| 4 | 12.8 | 6.3 | 9.1 | 11.9 | 5.9 | 8.5 | 10.6 | 7.0 | 8.5 | 9.6 | 6.9 | 7.9 |
| 5 | 11.3 | 6.3 | 8.2 | 11.6 | 5.6 | 8.2 | 10.4 | 7.0 | 8.2 | 9.9 | 7.2 | 8.3 |
| 6 | 11.4 | 6.7 | 8.6 | 11.3 | 5.3 | 7.8 | 9.0 | 6.9 | 7.8 | 10.0 | 7.5 | 8.4 |
| 7 | 11.6 | 6.4 | 8.6 | 9.5 | 6.0 | 7.6 | 10.3 | 7.0 | 8.4 | 10.5 | 7.8 | 8.8 |
| 8 | 12.5 | 6.1 | 8.9 | 10.1 | 5.6 | 7.4 | 10.4 | 7.0 | 8.6 | 10.7 | 8.0 | 9.0 |
| 9 | 12.8 | 6.1 | 9.0 | 10.8 | 5.6 | 7.9 | 10.1 | 6.8 | 8.2 | 9.4 | 6.9 | 8.3 |
| 10 | 11.4 | 6.2 | 7.7 | 9.1 | 5.4 | 7.0 | 9.8 | 6.7 | 7.8 | 8.3 | 6.8 | 7.7 |
| 11 | 11.6 | 6.0 | 8.3 | 7.5 | 5.4 | 6.2 | 10.3 | 7.3 | 8.5 | 7.6 | 6.0 | 7.1 |
| 12 | 11.2 | 5.9 | 8.1 | 8.6 | 5.4 | 6.7 | 10.1 | 7.2 | 8.4 | 9.7 | 7.4 | 8.4 |
| 13 | 12.4 | 6.5 | 8.6 | 9.9 | 5.4 | 7.3 | 8.9 | 7.3 | 8.0 | 10.3 | 8.1 | 8.9 |
| 14 | 10.5 | 6.4 | 7.9 | 10.5 | 6.0 | 7.9 | 9.3 | 7.1 | 7.9 | 9.7 | 8.4 | 8.9 |
| 15 | 10.6 | 6.5 | 8.2 | 10.5 | 6.1 | 7.6 | 9.5 | 7.2 | 8.2 | 9.9 | 8.6 | 9.1 |
| 16 | 12.3 | 6.2 | 8.7 | 10.9 | 6.2 | 8.2 | 11.7 | 7.4 | 9.3 | 11.1 | 8.9 | 9.7 |
| 17 | 12.6 | 6.3 | 9.0 | 10.2 | 5.5 | 7.6 | 12.4 | 8.1 | 9.8 | 10.3 | 8.9 | 9.4 |
| 18 | 12.0 | 6.2 | 8.5 | 10.2 | 5.5 | 7.4 | 9.6 | 7.0 | 8.6 | 10.8 | 8.9 | 9.6 |
| 19 | 11.9 | 5.9 | 8.4 | 10.2 | 5.6 | 7.4 | 8.1 | 6.9 | 7.4 | 10.2 | 9.0 | 9.3 |
| 20 | 12.5 | 5.6 | 8.6 | 10.6 | 5.9 | 7.8 | 7.7 | 6.8 | 7.1 | 10.2 | 9.1 | 9.6 |
| 21 | 11.5 | 5.3 | 7.9 | 10.7 | 6.2 | 8.1 | 8.3 | 6.8 | 7.4 | 10.7 | 8.2 | 9.4 |
| 22 | 10.1 | 4.9 | 6.8 | 10.8 | 6.4 | 8.3 | 8.6 | 7.0 | 7.6 | 10.2 | 8.5 | 9.3 |
| 23 | 11.0 | 5.5 | 7.8 | 10.9 | 6.5 | 8.3 | 8.8 | 7.5 | 8.1 | 11.0 | 8.8 | 9.6 |
| 24 | 11.1 | 5.6 | 8.1 | 10.8 | 6.3 | 8.1 | 9.6 | 7.9 | 8.6 | 10.8 | 7.5 | 9.4 |
| 25 | 11.8 | 6.2 | 8.6 | 10.3 | 5.7 | 7.6 | 10.0 | 7.1 | 8.6 | 9.0 | 6.7 | 8.1 |
| 26 | 11.9 | 5.7 | 8.3 | 10.2 | 6.3 | 7.9 | 8.2 | 6.5 | 7.7 | 9.2 | 7.9 | 8.3 |
| 27 | 11.4 | 5.1 | 7.6 | 10.3 | 6.5 | 8.1 | 8.9 | 7.8 | 8.3 | 9.7 | 8.0 | 8.6 |
| 28 | 12.0 | 6.0 | 8.6 | 10.1 | 5.6 | 7.8 | 9.3 | 7.9 | 8.5 | 9.7 | 8.0 | 8.6 |
| 29 | 12.2 | 6.1 | 8.5 | 10.7 | 6.6 | 8.3 | 9.4 | 8.2 | 8.7 | 8.5 | 7.3 | 8.0 |
| 30 | 9.9 | 6.2 | 7.8 | 10.4 | 6.6 | 8.1 | 9.3 | 8.2 | 8.6 | 8.3 | 7.8 | 8.0 |
| 31 | --- | --- | --- | 10.2 | 6.7 | 8.2 | 10.2 | 8.3 | 9.1 | --- | --- | --- |
| MONTH | 13.2 | 4.9 | 8.4 | 12.3 | 5.3 | 7.9 | 12.4 | 6.5 | 8.3 | 11.1 | 6.0 | 8.7 |
| YEAR | 16.1 | 4.9 | 9.3 | | | | | | | | | |

## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310) | CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916) | MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 1440 | 18 | -- | -- | -- | -- | <3.0 | 73 | 39 |
| FEB , 1986 | | | | | | | | | |
| 19... | 1105 | 15 | -- | 8.00 | 6.5 | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 1130 | 18 | 580 | 7.90 | 12.5 | -- | 3.1 | 69 | 40 |

| DATE | SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929) | POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE (MG/L AS SO4) (00946) | FLUO-RIDE, TOTAL (MG/L AS F) (00951) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | IRON (UG/L AS FE) (71885) | MANGA-NESE (UG/L AS MN) (71883) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 5.0 | 1.0 | 294 | -- | 14 | .1 | 14 | 400 | 60 |
| FEB , 1986 | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 6.0 | 1.0 | 290 | 7.0 | 14 | .1 | 13 | 200 | 80 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | |
| 31... | 2215 | 20 | 2.0 | .050 | .80 | .160 | -- |
| NOV | | | | | | | |
| 01... | 1015 | 31 | 1.4 | .080 | 1.8 | .460 | -- |
| 01... | 1152 | 33 | 1.3 | .080 | 1.6 | .420 | -- |
| 01... | 1154 | 33 | 1.3 | .080 | 1.6 | .440 | -- |
| 02... | 0415 | 35 | 1.5 | .050 | 1.4 | .350 | -- |
| 02... | 1615 | 30 | 1.2 | .140 | 2.5 | .750 | -- |
| 03... | 0415 | 24 | 1.6 | .040 | 1.0 | .240 | -- |
| 18... | 2145 | 29 | 1.7 | .140 | 1.4 | .380 | -- |
| DEC | | | | | | | |
| 11... | 1440 | 18 | 2.5 | .030 | .20 | .030 | .018 |
| JAN , 1986 | | | | | | | |
| 14... | 1145 | 16 | 2.5 | <.020 | .20 | .020 | .013 |
| FEB | | | | | | | |
| 19... | 1105 | 15 | 2.5 | <.020 | .20 | .020 | .012 |
| MAR | | | | | | | |
| 10... | 1145 | 23 | 1.8 | .350 | 1.4 | .280 | -- |
| 10... | 2345 | 24 | 1.8 | .310 | 1.4 | .280 | -- |
| 11... | 0744 | 23 | 1.9 | .240 | 1.5 | .160 | -- |
| 18... | 0530 | 27 | 1.7 | .430 | 2.1 | .440 | -- |
| 18... | 1730 | 32 | 1.5 | .470 | 2.3 | .480 | -- |
| 18... | 2330 | 39 | 1.5 | 1.10 | 4.6 | 1.07 | -- |
| 19... | 0530 | 41 | 1.5 | .570 | 2.6 | .640 | -- |
| 19... | 0924 | 35 | 1.6 | .390 | 1.8 | .440 | .210 |
| 20... | 0900 | 24 | 2.0 | .170 | .90 | .200 | -- |
| MAY | | | | | | | |
| 07... | 1130 | 18 | 2.3 | <.020 | .30 | .040 | .015 |
| 17... | 1630 | 28 | 1.9 | .210 | 1.6 | .420 | -- |
| 17... | 2230 | 29 | 1.8 | .170 | 1.4 | .360 | -- |
| 18... | 0430 | 28 | 1.8 | .110 | 1.0 | .190 | -- |
| 18... | 1040 | 27 | 1.8 | .110 | 1.0 | 160 | -- |
| JUN | | | | | | | |
| 24... | 0915 | 15 | 2.1 | .030 | .20 | .060 | -- |

## 05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SEDIMENT, SUSPENDED (MG/L) (80154) |
|---|---|---|---|
| OCT , 1985 | | | |
| 04... | 1448 | 15 | 107 |
| 11... | 1504 | 15 | 39 |
| 18... | 0912 | 16 | 122 |
| 18... | 1800 | 19 | 97 |
| 27... | 0816 | 16 | 107 |
| 31... | 1636 | 15 | 50 |
| NOV | | | |
| 01... | 0415 | 27 | 179 |
| 01... | 1150 | 33 | 140 |
| 01... | 1152 | 33 | 201 |
| 01... | 1333 | 36 | 253 |
| 01... | 1334 | 36 | 243 |
| 01... | 2215 | 29 | 193 |
| 02... | 0015 | 38 | 97 |
| 02... | 1615 | 30 | 62 |
| 03... | 0415 | 24 | 31 |
| 07... | 1402 | 21 | 23 |
| 14... | 0806 | 23 | 29 |
| 18... | 1545 | 26 | 101 |
| 19... | 0345 | 29 | 91 |
| 22... | 0732 | 22 | 30 |
| DEC | | | |
| 06... | 1553 | 19 | 108 |
| 13... | 0753 | 17 | 35 |
| 22... | 1628 | 17 | 31 |
| 29... | 0810 | 16 | 20 |
| JAN , 1986 | | | |
| 05... | 1601 | 17 | 15 |
| 12... | 0855 | 16 | 39 |
| 19... | 1638 | 17 | 17 |
| 24... | 0809 | 17 | 41 |
| 30... | 1446 | 19 | 25 |
| FEB | | | |
| 06... | 1223 | 21 | 25 |
| 14... | 0748 | 15 | 17 |
| 19... | 1105 | 15 | 25 |
| 20... | 1001 | 15 | 14 |
| 28... | 0740 | 14 | 45 |
| MAR , 1986 | | | |
| 07... | 0740 | 15 | 19 |
| 10... | 1145 | 23 | 59 |
| 10... | 1745 | 25 | 91 |
| 11... | 0545 | 23 | 60 |
| 13... | 1608 | 20 | 540 |
| 18... | 0530 | 27 | 88 |
| 18... | 1730 | 32 | 103 |
| 18... | 2330 | 39 | 168 |
| 19... | 0530 | 41 | 115 |
| 19... | 0924 | 35 | 65 |
| 19... | 0925 | 35 | 56 |
| 20... | 1100 | 24 | 14 |
| 20... | 1627 | 23 | 17 |
| 21... | 1015 | 21 | 11 |
| 27... | 1454 | 18 | 9 |
| APR | | | |
| 02... | 1635 | 20 | 27 |
| 11... | 0733 | 18 | 12 |
| 18... | 0826 | 20 | 13 |
| 24... | 1033 | 18 | 19 |
| MAY | | | |
| 02... | 0737 | 20 | 31 |
| 07... | 1125 | 18 | 26 |
| 08... | 1839 | 18 | 27 |
| 14... | 0747 | 18 | 33 |
| 17... | 1630 | 28 | 54 |
| 17... | 2230 | 29 | 63 |
| 18... | 0430 | 28 | 49 |
| 18... | 1040 | 27 | 35 |
| 25... | 0725 | 17 | 32 |
| 31... | 0754 | 17 | 25 |
| JUN | | | |
| 07... | 0754 | 14 | 20 |
| 13... | 0734 | 16 | 49 |
| 22... | 0809 | 18 | 42 |
| 26... | 0746 | 15 | 68 |
| JUL | | | |
| 07... | 1858 | 15 | 28 |

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI

LOCATION.--Lat 43°38'40", long 89°38'44", in SW 1/4 SW 1/4 sec.35, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on left bank at culvert on Brewery Road, 0.75 mi upstream from Black Earth Creek.

DRAINAGE AREA.--10.5 mi$^2$, of which 2.80 mi$^2$ is non-contributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 900 ft, from topographic map.

REMARKS.--Estimated daily discharges: May 6-12 and ice periods listed in rating table below. Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 231 ft$^3$/s July 25, 1985, gage height, 13.51 ft; minimum discharge, 0.79 ft$^3$/s May 23, 24, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33 ft$^3$/s Nov. 1, gage height, 10.26 ft; maximum gage height, 10.35 ft, Jan. 10 (backwater from ice); minimum discharge, 1.5 ft$^3$/s Jan. 26, result of freezeup.

RATING TABLE (gage height in feet, and discharge, in cubic feet per second). (Shifting-control method used Apr. 20 to Aug. 25, Sept. 28-30; stage-discharge relation affected by ice Nov. 29 to Mar. 1, Mar. 7, 8.)

| | | | |
|---|---|---|---|
| 8.5 | 1.6 | 9.0 | 5.3 |
| 8.6 | 2.0 | 9.4 | 11 |
| 8.8 | 2.3 | 10.0 | 25 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | 21 | 3.0 | 2.5 | 2.0 | 2.4 | 3.2 | 3.2 | 2.4 | 4.6 | 3.0 | 3.4 |
| 2 | 2.3 | 10 | 2.9 | 2.4 | 1.9 | 2.5 | 3.0 | 3.1 | 2.4 | 4.7 | 3.0 | 3.2 |
| 3 | 2.3 | 4.1 | 2.8 | 2.3 | 2.0 | 2.6 | 3.6 | 3.2 | 2.4 | 4.3 | 3.0 | 3.4 |
| 4 | 2.4 | 3.5 | 2.8 | 2.2 | 2.1 | 2.9 | 3.5 | 3.0 | 2.6 | 4.0 | 3.1 | 3.4 |
| 5 | 2.6 | 3.2 | 2.8 | 2.1 | 2.7 | 3.0 | 4.0 | 3.2 | 2.5 | 4.4 | 3.1 | 3.3 |
| 6 | 2.4 | 3.4 | 2.7 | 2.0 | 2.4 | 2.9 | 3.3 | 3.2 | 2.6 | 4.6 | 3.5 | 3.4 |
| 7 | 2.3 | 3.7 | 2.7 | 1.9 | 2.2 | 2.8 | 3.1 | 3.1 | 2.7 | 4.7 | 3.6 | 3.7 |
| 8 | 2.3 | 3.2 | 2.7 | 1.8 | 2.1 | 2.7 | 3.0 | 3.1 | 2.6 | 6.7 | 3.8 | 3.9 |
| 9 | 2.6 | 3.3 | 2.7 | 1.8 | 2.1 | 2.7 | 3.0 | 3.0 | 2.7 | 4.4 | 3.4 | 4.1 |
| 10 | 3.2 | 3.4 | 2.7 | 1.8 | 2.0 | 6.8 | 3.0 | 3.0 | 3.3 | 5.0 | 4.1 | 8.7 |
| 11 | 2.7 | 3.5 | 2.7 | 1.9 | 1.9 | 5.5 | 3.0 | 3.1 | 3.5 | 7.3 | 3.4 | 15 |
| 12 | 5.8 | 3.8 | 2.6 | 2.0 | 2.0 | 3.9 | 3.3 | 3.5 | 3.2 | 4.3 | 3.1 | 5.2 |
| 13 | 3.4 | 5.8 | 2.5 | 2.0 | 2.1 | 4.1 | 3.1 | 4.1 | 3.1 | 3.6 | 3.2 | 4.1 |
| 14 | 2.8 | 5.4 | 2.5 | 2.0 | 2.1 | 4.6 | 4.6 | 4.3 | 3.3 | 3.3 | 3.5 | 4.0 |
| 15 | 2.6 | 3.9 | 2.4 | 1.9 | 2.0 | 4.5 | 3.7 | 4.0 | 3.4 | 3.3 | 3.4 | 4.0 |
| 16 | 2.5 | 8.9 | 2.5 | 1.9 | 1.9 | 5.5 | 3.2 | 4.0 | 3.3 | 3.3 | 3.3 | 3.8 |
| 17 | 2.4 | 4.5 | 2.5 | 1.9 | 2.1 | 6.7 | 3.0 | 6.8 | 3.1 | 3.2 | 3.2 | 3.7 |
| 18 | 2.9 | 7.3 | 2.5 | 1.9 | 2.3 | 15 | 2.9 | 4.7 | 3.1 | 3.1 | 3.1 | 3.8 |
| 19 | 3.8 | 6.4 | 2.4 | 1.9 | 2.6 | 15 | 2.9 | 3.0 | 3.2 | 2.9 | 3.1 | 4.1 |
| 20 | 3.0 | 3.8 | 2.3 | 2.0 | 2.6 | 5.7 | 2.8 | 2.7 | 3.3 | 3.0 | 3.2 | 3.9 |
| 21 | 2.8 | 3.2 | 2.3 | 2.1 | 2.6 | 4.2 | 2.8 | 2.6 | 3.3 | 2.8 | 3.3 | 5.8 |
| 22 | 2.6 | 3.1 | 2.4 | 2.0 | 2.6 | 4.9 | 2.8 | 2.4 | 5.6 | 2.8 | 3.3 | 5.2 |
| 23 | 3.0 | 3.1 | 2.6 | 2.1 | 2.6 | 4.9 | 2.8 | 2.4 | 3.4 | 2.7 | 3.4 | 4.5 |
| 24 | 4.6 | 3.0 | 2.5 | 2.0 | 2.6 | 3.8 | 2.8 | 2.4 | 3.4 | 2.6 | 3.3 | 4.3 |
| 25 | 3.0 | 3.0 | 2.4 | 2.0 | 2.5 | 3.9 | 2.9 | 2.4 | 3.3 | 3.1 | 3.4 | 11 |
| 26 | 2.8 | 3.0 | 2.4 | 1.9 | 2.5 | 3.6 | 3.8 | 2.4 | 3.5 | 2.9 | 14 | 4.9 |
| 27 | 2.7 | 2.9 | 2.4 | 1.9 | 2.4 | 3.3 | 3.2 | 2.6 | 6.8 | 3.0 | 5.6 | 4.2 |
| 28 | 2.6 | 2.9 | 2.4 | 1.9 | 2.3 | 3.3 | 3.1 | 2.5 | 4.1 | 4.4 | 3.8 | 3.9 |
| 29 | 2.6 | 2.8 | 2.4 | 1.9 | --- | 3.2 | 3.1 | 2.5 | 4.0 | 3.0 | 3.5 | 6.7 |
| 30 | 2.6 | 2.8 | 2.5 | 1.9 | --- | 3.0 | 3.5 | 2.5 | 4.7 | 2.9 | 3.5 | 5.7 |
| 31 | 2.8 | --- | 2.4 | 1.9 | --- | 3.0 | --- | 2.5 | --- | 3.0 | 3.3 | --- |
| TOTAL | 88.9 | 141.9 | 79.4 | 61.8 | 63.2 | 142.9 | 96.0 | 98.5 | 98.8 | 117.9 | 116.5 | 148.3 |
| MEAN | 2.87 | 4.73 | 2.56 | 1.99 | 2.26 | 4.61 | 3.20 | 3.18 | 3.29 | 3.80 | 3.76 | 4.94 |
| MAX | 5.8 | 21 | 3.0 | 2.5 | 2.7 | 15 | 4.6 | 6.8 | 5.6 | 7.3 | 14 | 15 |
| MIN | 2.3 | 2.8 | 2.3 | 1.8 | 1.9 | 2.4 | 2.8 | 2.4 | 2.4 | 2.6 | 3.0 | 3.2 |

CAL YR 1985 TOTAL 1097.74 MEAN 3.01 MAX 142 MIN .88
WTR YR 1986 TOTAL 1254.10 MEAN 3.44 MAX 21 MIN 1.8

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986.
TOTAL PHOSPHORUS DISCHARGE: October 1984 to June 1986.
TOTAL NITROGEN DISCHARGE: October 1984 to June 1986.
WATER TEMPERATURE: November 1984 to September 1986.

INSTRUMENTATION.--Water-quality sampler since December 1984. Continuous water temperature recorder since November 1984.

COOPERATION.--Water-sediment samples were collected by the U.S. Geological Survey; chemical analysis was performed by the Wisconsin State Laboratory of Hygiene; and suspended-sediment concentrations were determined by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 493 tons July 25, 1985; minimum daily, 0.06 ton May 10, 1985.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 1,830 lb July 25, 1985; minimum daily, 0.48 lb Feb. 1, 2, 1985.
TOTAL NITROGEN DISCHARGE: Maximum daily, 4,550 lb July 25, 1985; minimum daily, 10 lb May 24, 25, 1985.
WATER TEMPERATURE: Maximum observed, 27.0°C July 17, 1986; minimum observed, 0°C on several days during the winter period.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 35 tons Mar. 19; minimum daily, 0.12 ton May 8.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 163 lb Nov. 1; minimum daily, 1.02 lb May 25.
TOTAL NITROGEN DISCHARGE: Maximum daily, 682 lb Mar. 18; minimum daily, 25 lb Oct. 2-3, 7-8.
WATER TEMPERATURE: Maximum observed, 27.0°C July 17; minimum observed, 0°C on several days during the winter period.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .17 | 18 | .62 | .60 | .40 | .85 | .94 | .36 | .43 | | | |
| 2 | .19 | 4.0 | .61 | .57 | .38 | .84 | .88 | .33 | .42 | | | |
| 3 | .22 | .69 | .60 | .55 | .39 | .87 | .99 | .28 | .41 | | | |
| 4 | .27 | .50 | .61 | .52 | .25 | .96 | .92 | .21 | .43 | | | |
| 5 | .56 | .41 | .63 | .49 | .48 | 1.0 | 1.3 | .19 | .41 | | | |
| 6 | .33 | .88 | .62 | .46 | .47 | .97 | .67 | .17 | .40 | | | |
| 7 | .34 | 1.0 | .63 | .44 | .43 | 1.1 | .58 | .16 | .41 | | | |
| 8 | .38 | .38 | .65 | .41 | .42 | 1.0 | .51 | .12 | .37 | | | |
| 9 | .45 | .46 | .66 | .41 | .42 | .91 | .47 | .16 | .36 | | | |
| 10 | .80 | .58 | .68 | .41 | .40 | 7.2 | .42 | .19 | 1.1 | | | |
| 11 | .54 | .71 | .68 | .43 | .39 | 2.9 | .39 | .24 | 2.6 | | | |
| 12 | 3.2 | .79 | .68 | .45 | .41 | 2.2 | .43 | .29 | .37 | | | |
| 13 | .80 | 2.1 | .67 | .45 | .44 | 3.0 | .41 | .42 | .34 | | | |
| 14 | .41 | 1.9 | .66 | .44 | .44 | 3.0 | 2.0 | .53 | .36 | | | |
| 15 | .36 | .65 | .64 | .42 | .43 | 2.3 | .49 | .82 | .38 | | | |
| 16 | .35 | 1.4 | .65 | .42 | .41 | 3.3 | .38 | .54 | .37 | | | |
| 17 | .35 | .73 | .65 | .42 | .45 | 4.2 | .34 | 5.0 | .34 | | | |
| 18 | .67 | 2.7 | .65 | .41 | .50 | 26 | .31 | 1.3 | .35 | | | |
| 19 | 1.1 | 1.9 | .62 | .41 | .64 | 35 | .32 | .38 | .36 | | | |
| 20 | .42 | .64 | .59 | .43 | 1.1 | 5.2 | .32 | .24 | .36 | | | |
| 21 | .39 | .54 | .58 | .45 | 1.1 | 2.8 | .33 | .21 | .37 | | | |
| 22 | .36 | .52 | .61 | .43 | 1.1 | 1.7 | .34 | .18 | .62 | | | |
| 23 | 1.0 | .53 | .65 | .44 | 1.0 | 1.6 | .34 | .17 | .21 | | | |
| 24 | 1.7 | .52 | .63 | .42 | .99 | 1.2 | .36 | .15 | .21 | | | |
| 25 | .46 | .54 | .60 | .42 | .91 | 1.2 | .36 | .15 | .21 | | | |
| 26 | .52 | .56 | .60 | .40 | .88 | 1.1 | 1.1 | .18 | .23 | | | |
| 27 | .63 | .55 | .59 | .39 | .81 | .98 | .38 | .23 | 1.1 | | | |
| 28 | .56 | .56 | .59 | .39 | .79 | .96 | .37 | .28 | .45 | | | |
| 29 | .51 | .55 | .58 | .38 | --- | .94 | .36 | .33 | .58 | | | |
| 30 | .47 | .56 | .61 | .38 | --- | .89 | .40 | .40 | .88 | | | |
| 31 | .61 | --- | .58 | .38 | --- | .87 | --- | .46 | --- | | | |
| TOTAL | 19.12 | 45.85 | 19.42 | 13.62 | 16.83 | 117.04 | 17.41 | 14.67 | 15.43 | | | |

WTR YR 1986 TOTAL 279.39

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.68 | 163 | 3.40 | 3.51 | 2.27 | 2.07 | 3.87 | 1.43 | 1.04 | | | |
| 2 | 2.50 | 39.00 | 3.45 | 3.37 | 2.05 | 2.16 | 1.59 | 1.37 | 1.04 | | | |
| 3 | 2.48 | 5.89 | 3.48 | 3.11 | 2.16 | 2.28 | 5.14 | 1.41 | 1.06 | | | |
| 4 | 2.56 | 3.73 | 3.63 | 2.97 | 3.06 | 2.46 | 4.80 | 1.32 | 1.13 | | | |
| 5 | 3.55 | 3.49 | 3.63 | 2.84 | 3.32 | 2.54 | 6.62 | 1.41 | 1.10 | | | |
| 6 | 2.59 | 5.92 | 3.65 | 2.70 | 2.59 | 2.43 | 1.70 | 1.53 | 1.12 | | | |
| 7 | 2.48 | 6.95 | 3.79 | 2.57 | 2.38 | 2.27 | 1.59 | 1.77 | 1.17 | | | |
| 8 | 2.53 | 3.44 | 3.94 | 2.33 | 2.27 | 2.19 | 1.53 | 1.66 | 1.14 | | | |
| 9 | 2.77 | 3.51 | 4.08 | 2.33 | 2.15 | 2.39 | 1.53 | 1.92 | 1.16 | | | |
| 10 | 5.27 | 3.68 | 4.23 | 2.33 | 2.05 | 41.00 | 1.49 | 1.78 | 1.43 | | | |
| 11 | 2.86 | 3.74 | 4.37 | 2.46 | 1.95 | 15.00 | 1.50 | 1.74 | 3.60 | | | |
| 12 | 16.00 | 4.14 | 4.21 | 2.59 | 2.05 | 6.34 | 1.61 | 1.60 | 1.39 | | | |
| 13 | 3.68 | 16.00 | 4.05 | 2.59 | 2.15 | 5.57 | 1.53 | 6.91 | 1.32 | | | |
| 14 | 3.03 | 5.80 | 3.92 | 2.48 | 2.15 | 5.30 | 9.26 | 7.80 | 1.42 | | | |
| 15 | 2.85 | 4.24 | 3.76 | 2.36 | 2.05 | 4.27 | 1.78 | 11.00 | 3.24 | | | |
| 16 | 2.68 | 37.00 | 3.92 | 2.36 | 1.85 | 18.00 | 1.53 | 9.66 | 1.43 | | | |
| 17 | 2.59 | 5.05 | 3.92 | 2.36 | 2.04 | 28.00 | 1.45 | 53.00 | 1.33 | | | |
| 18 | 3.17 | 50.00 | 3.92 | 2.36 | 2.24 | 148 | 1.39 | 14.00 | 1.35 | | | |
| 19 | 7.31 | 22.00 | 3.63 | 2.36 | 2.53 | 142 | 1.38 | 1.67 | 1.40 | | | |
| 20 | 3.25 | 5.08 | 3.48 | 2.38 | 2.53 | 15.00 | 1.35 | 1.19 | 1.41 | | | |
| 21 | 2.99 | 2.67 | 3.48 | 2.49 | 2.53 | 8.48 | 1.34 | 1.11 | 1.81 | | | |
| 22 | 2.82 | 2.64 | 3.63 | 2.38 | 2.39 | 11.00 | 1.32 | 1.04 | 16.00 | | | |
| 23 | 6.82 | 2.73 | 3.79 | 2.49 | 2.39 | 6.35 | 1.31 | 1.04 | 4.69 | | | |
| 24 | 19.00 | 2.75 | 3.65 | 2.38 | 2.43 | 3.99 | 1.31 | 1.04 | 3.11 | | | |
| 25 | 4.26 | 2.83 | 3.50 | 2.38 | 2.30 | 3.27 | 1.35 | 1.02 | 1.60 | | | |
| 26 | 2.20 | 2.95 | 3.50 | 2.15 | 2.30 | 2.47 | 5.70 | 1.04 | 1.50 | | | |
| 27 | 1.98 | 2.97 | 3.50 | 2.15 | 2.20 | 1.83 | 1.44 | 1.12 | 11.00 | | | |
| 28 | 1.77 | 2.98 | 3.50 | 2.15 | 1.99 | 1.75 | 1.41 | 1.09 | 1.77 | | | |
| 29 | 1.65 | 3.02 | 3.37 | 2.15 | --- | 1.70 | 1.39 | 1.07 | 1.74 | | | |
| 30 | 1.53 | 3.18 | 3.51 | 2.15 | --- | 1.62 | 4.62 | 1.07 | 10.00 | | | |
| 31 | 3.63 | --- | 3.37 | 2.15 | --- | 1.59 | --- | 1.08 | --- | | | |
| TOTAL | 125.48 | 420.38 | 115.26 | 77.38 | 64.37 | 493.32 | 73.83 | 135.89 | 82.50 | | | |

WTR YR 1986 TOTAL 1588.41

### NITROGEN, TOTAL, LOAD POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27.0 | 644 | 45.0 | 46.0 | 35.0 | 41.0 | 64.0 | 33.0 | 26.0 | | | |
| 2 | 25.0 | 216 | 44.0 | 44.0 | 33.0 | 44.0 | 35.0 | 31.0 | 26.0 | | | |
| 3 | 25.0 | 52.0 | 44.0 | 42.0 | 35.0 | 46.0 | 76.0 | 33.0 | 26.0 | | | |
| 4 | 26.0 | 37.0 | 45.0 | 39.0 | 36.0 | 50.0 | 40.0 | 30.0 | 28.0 | | | |
| 5 | 37.0 | 35.0 | 47.0 | 37.0 | 49.0 | 52.0 | 89.0 | 33.0 | 28.0 | | | |
| 6 | 26.0 | 36.0 | 47.0 | 36.0 | 41.0 | 50.0 | 37.0 | 35.0 | 28.0 | | | |
| 7 | 25.0 | 60.0 | 48.0 | 34.0 | 38.0 | 48.0 | 35.0 | 41.0 | 29.0 | | | |
| 8 | 25.0 | 34.0 | 50.0 | 32.0 | 36.0 | 46.0 | 34.0 | 39.0 | 28.0 | | | |
| 9 | 28.0 | 35.0 | 51.0 | 32.0 | 36.0 | 106 | 34.0 | 45.0 | 29.0 | | | |
| 10 | 35.0 | 37.0 | 52.0 | 32.0 | 35.0 | 255 | 33.0 | 43.0 | 55.0 | | | |
| 11 | 29.0 | 37.0 | 53.0 | 33.0 | 33.0 | 113 | 33.0 | 42.0 | 60.0 | | | |
| 12 | 112 | 41.0 | 52.0 | 35.0 | 35.0 | 67.0 | 36.0 | 39.0 | 35.0 | | | |
| 13 | 37.0 | 112 | 50.0 | 35.0 | 36.0 | 92.0 | 34.0 | 78.0 | 33.0 | | | |
| 14 | 30.0 | 101 | 50.0 | 35.0 | 36.0 | 110 | 110 | 84.0 | 35.0 | | | |
| 15 | 29.0 | 42.0 | 47.0 | 33.0 | 35.0 | 77.0 | 40.0 | 77.0 | 37.0 | | | |
| 16 | 27.0 | 201 | 49.0 | 33.0 | 33.0 | 153 | 34.0 | 72.0 | 36.0 | | | |
| 17 | 26.0 | 49.0 | 49.0 | 33.0 | 36.0 | 201 | 32.0 | 198 | 33.0 | | | |
| 18 | 32.0 | 227 | 49.0 | 33.0 | 40.0 | 682 | 31.0 | 90.0 | 34.0 | | | |
| 19 | 63.0 | 146 | 47.0 | 33.0 | 45.0 | 593 | 31.0 | 32.0 | 35.0 | | | |
| 20 | 33.0 | 55.0 | 45.0 | 35.0 | 45.0 | 152 | 30.0 | 30.0 | 35.0 | | | |
| 21 | 30.0 | 36.0 | 43.0 | 36.0 | 45.0 | 50.0 | 30.0 | 28.0 | 38.0 | | | |
| 22 | 28.0 | 35.0 | 45.0 | 35.0 | 45.0 | 121 | 30.0 | 26.0 | 126 | | | |
| 23 | 59.0 | 36.0 | 49.0 | 36.0 | 45.0 | 121 | 30.0 | 26.0 | 58.0 | | | |
| 24 | 100.0 | 41.0 | 47.0 | 35.0 | 45.0 | 45.0 | 30.0 | 26.0 | 41.0 | | | |
| 25 | 47.0 | 37.0 | 45.0 | 35.0 | 43.0 | 46.0 | 31.0 | 26.0 | 38.0 | | | |
| 26 | 30.0 | 39.0 | 45.0 | 33.0 | 43.0 | 43.0 | 69.0 | 26.0 | 56.0 | | | |
| 27 | 29.0 | 39.0 | 45.0 | 33.0 | 41.0 | 38.0 | 33.0 | 28.0 | 90.0 | | | |
| 28 | 28.0 | 39.0 | 44.0 | 33.0 | 40.0 | 38.0 | 32.0 | 27.0 | 46.0 | | | |
| 29 | 28.0 | 48.0 | 44.0 | 33.0 | --- | 37.0 | 32.0 | 27.0 | 44.0 | | | |
| 30 | 28.0 | 45.0 | 46.0 | 33.0 | --- | 35.0 | 60.0 | 27.0 | 87.0 | | | |
| 31 | 37.0 | --- | 44.0 | 33.0 | --- | 34.0 | --- | 27.0 | --- | | | |
| TOTAL | 1141.0 | 2592.0 | 1461.0 | 1087.0 | 1095.0 | 3586.0 | 1265.0 | 1399.0 | 1300.0 | | | |

WTR YR 1986 TOTAL 14926.0

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 12.0 | 9.0 | 10.5 | 10.5 | 9.0 | 9.5 | .5 | .0 | .0 | .0 | .0 | .0 |
| 2 | 13.5 | 7.5 | 10.0 | 9.0 | 8.0 | 8.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3 | 14.0 | 9.0 | 11.5 | 8.5 | 7.0 | 7.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4 | 13.0 | 11.0 | 12.0 | 9.5 | 6.5 | 7.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5 | 11.5 | 9.0 | 10.5 | 7.0 | 5.0 | 6.0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6 | 12.5 | 7.5 | 9.5 | 7.5 | 7.0 | 7.0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7 | 12.5 | 8.0 | 10.5 | 8.5 | 5.5 | 7.0 | .5 | .0 | .0 | .0 | .0 | .0 |
| 8 | 13.5 | 9.5 | 12.5 | 7.0 | 3.0 | 5.5 | 1.5 | .0 | .5 | .0 | .0 | .0 |
| 9 | 13.0 | 9.0 | 10.5 | 3.5 | .5 | 2.0 | 2.5 | 1.5 | 2.0 | .0 | .0 | .0 |
| 10 | 12.0 | 9.0 | 9.5 | 2.5 | .5 | 1.5 | 3.0 | 1.5 | 2.0 | .0 | .0 | .0 |
| 11 | 12.0 | 7.5 | 10.0 | 4.0 | .5 | 2.5 | 2.0 | .0 | 1.5 | .0 | .0 | .0 |
| 12 | 13.0 | 11.0 | 12.0 | 5.5 | 4.0 | 4.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13 | 15.5 | 11.0 | 13.0 | 5.5 | 4.0 | 4.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14 | 13.0 | 11.0 | 12.0 | 5.0 | 4.0 | 4.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15 | 13.0 | 9.5 | 11.0 | 5.5 | 3.5 | 4.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16 | 12.0 | 7.5 | 9.5 | 5.0 | 4.0 | 4.5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17 | 12.0 | 8.5 | 10.5 | 7.0 | 4.0 | 5.5 | .0 | .0 | .0 | 3.0 | .0 | 1.5 |
| 18 | 12.5 | 11.5 | 12.0 | 10.0 | 7.0 | 8.0 | .0 | .0 | .0 | 3.5 | .5 | 2.5 |
| 19 | 12.5 | 11.0 | 11.5 | 10.0 | 4.0 | 8.0 | .0 | .0 | .0 | 4.0 | 2.0 | 3.0 |
| 20 | 12.0 | 10.5 | 11.0 | 3.0 | .0 | .5 | .0 | .0 | .0 | 3.5 | 2.0 | 2.5 |
| 21 | 12.5 | 10.5 | 11.5 | 2.0 | .0 | 1.0 | 0 | .0 | .0 | 4.0 | 1.5 | 2.5 |
| 22 | 13.5 | 10.5 | 12.0 | 3.0 | 1.0 | 2.0 | .0 | .0 | .0 | 3.0 | .0 | 1.5 |
| 23 | 13.0 | 12.0 | 12.5 | 2.0 | .0 | 1.5 | .0 | .0 | .0 | 2.5 | .0 | .5 |
| 24 | 14.0 | 10.0 | 12.0 | .0 | .0 | .0 | .0 | .0 | .0 | 2.5 | .5 | 1.5 |
| 25 | 12.0 | 7.5 | 9.5 | 2.0 | .0 | .5 | .0 | .0 | .0 | 2.0 | .0 | 1.0 |
| 26 | 13.5 | 8.5 | 11.0 | 4.0 | 1.5 | 3.0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 27 | 12.0 | 8.0 | 10.0 | 1.5 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 28 | 10.5 | 6.5 | 8.5 | 2.0 | .0 | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 29 | 10.5 | 7.0 | 8.5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 30 | 11.0 | 6.5 | 8.5 | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 31 | 9.5 | 7.0 | 8.5 | --- | --- | --- | .0 | .0 | .0 | 1.5 | .0 | .5 |
| MONTH | 15.5 | 6.5 | 10.5 | 10.5 | .0 | 4.0 | 3.0 | .0 | .0 | 4.0 | .0 | .5 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | 3.0 | .0 | 2.0 | 7.5 | 1.5 | 3.5 | 17.0 | 7.5 | 11.5 | 14.5 | 8.5 | 11.5 |
| 2 | 4.0 | 2.5 | 3.0 | 8.0 | 2.0 | 4.5 | 16.5 | 4.5 | 9.0 | 18.0 | 7.0 | 11.5 |
| 3 | 3.5 | 2.5 | 3.0 | 7.0 | 1.0 | 3.5 | 7.5 | 6.0 | 6.5 | 20.5 | 6.0 | 12.5 |
| 4 | 2.5 | .0 | 1.0 | 4.5 | .0 | 2.0 | 12.0 | 6.5 | 8.5 | 21.0 | 9.0 | 14.5 |
| 5 | 2.0 | .0 | 1.0 | 5.5 | .0 | 1.0 | 15.5 | 7.5 | 10.5 | 20.5 | 11.5 | 15.0 |
| 6 | 2.0 | .0 | 1.0 | .0 | .0 | .0 | 11.0 | 8.0 | 9.5 | 25.0 | 13.5 | 17.5 |
| 7 | 4.0 | .0 | 1.5 | 2.5 | .0 | .5 | 18.5 | 6.0 | 10.5 | 20.0 | 9.5 | 15.0 |
| 8 | 5.0 | .5 | 2.5 | 4.5 | .0 | 2.0 | 11.0 | 5.5 | 8.0 | 22.5 | 9.0 | 15.0 |
| 9 | .0 | .0 | .0 | 5.5 | 2.0 | 4.0 | 15.0 | 3.5 | 8.5 | 22.5 | 9.0 | 15.0 |
| 10 | .0 | .0 | .0 | 4.0 | 1.0 | 1.0 | 18.0 | 3.0 | 9.0 | 21.5 | 11.0 | 15.5 |
| 11 | .0 | .0 | .0 | 8.5 | .0 | 3.5 | 19.5 | 3.5 | 10.0 | 16.5 | 11.5 | 13.5 |
| 12 | .0 | .0 | .0 | 5.0 | 1.0 | 3.0 | 8.5 | 5.0 | 7.0 | 18.5 | 12.5 | 15.0 |
| 13 | .0 | .0 | .0 | 5.5 | 3.0 | 4.0 | 14.5 | 5.5 | 9.0 | 17.0 | 10.5 | 13.0 |
| 14 | .0 | .0 | .0 | 5.5 | 3.0 | 3.5 | 7.0 | 4.5 | 6.0 | 19.5 | 11.5 | 14.0 |
| 15 | 2.0 | .0 | .5 | 6.0 | 3.0 | 4.0 | 10.5 | 3.5 | 6.5 | 15.0 | 11.0 | 13.0 |
| 16 | 3.5 | 1.5 | 2.5 | 9.5 | 2.5 | 4.5 | 15.0 | 5.5 | 9.0 | 20.0 | 12.5 | 15.5 |
| 17 | 4.5 | 3.0 | 3.5 | 7.5 | 2.0 | 4.0 | 18.5 | 5.0 | 10.0 | 14.5 | 12.0 | 13.5 |
| 18 | 4.0 | 3.0 | 3.0 | 2.5 | 1.5 | 2.0 | 16.0 | 6.0 | 10.5 | 19.5 | 9.5 | 14.0 |
| 19 | 5.0 | 3.5 | 4.5 | 5.0 | .0 | 2.0 | 15.5 | 8.5 | 11.0 | 15.0 | 9.0 | 12.0 |
| 20 | 3.5 | .0 | 2.0 | 7.0 | .0 | 2.0 | 18.0 | 6.5 | 10.5 | 20.0 | 8.0 | 13.0 |
| 21 | 4.0 | .0 | .5 | 9.5 | .0 | 3.5 | 12.0 | 4.5 | 8.0 | 21.0 | 8.5 | 14.0 |
| 22 | 3.0 | .0 | 1.0 | 9.5 | 1.0 | 4.5 | 16.0 | 2.0 | 8.5 | 14.5 | 9.0 | 12.0 |
| 23 | 4.5 | .0 | 1.5 | 11.5 | 2.0 | 5.5 | 15.5 | 3.5 | 9.5 | 20.5 | 8.0 | 13.5 |
| 24 | 6.5 | .0 | 2.0 | 9.5 | 1.0 | 5.0 | 21.0 | 7.0 | 13.0 | 18.0 | 9.0 | 13.0 |
| 25 | 5.0 | .0 | 2.5 | 16.0 | 5.0 | 9.5 | 22.0 | 9.5 | 14.5 | 23.5 | 10.0 | 16.0 |
| 26 | 4.0 | .0 | 2.0 | 14.0 | 4.5 | 9.0 | 22.0 | 12.0 | 16.0 | 19.0 | 12.5 | 15.0 |
| 27 | 5.0 | .0 | 1.0 | 14.0 | 2.0 | 7.0 | 25.5 | 11.5 | 17.0 | 18.0 | 12.5 | 14.5 |
| 28 | 7.0 | .0 | 2.0 | 18.0 | 4.5 | 10.5 | 16.5 | 9.0 | 12.5 | 22.0 | 13.0 | 16.0 |
| 29 | --- | --- | --- | 21.0 | 7.5 | 13.0 | 21.0 | 7.5 | 13.5 | 23.5 | 12.5 | 17.0 |
| 30 | --- | --- | --- | 18.0 | 8.0 | 12.0 | 18.0 | 11.5 | 13.5 | 27.0 | 12.5 | 19.0 |
| 31 | --- | --- | --- | 19.0 | 7.0 | 12.0 | --- | --- | --- | 25.5 | 13.5 | 19.0 |
| MONTH | 7.0 | .0 | 1.5 | 21.0 | .0 | 4.5 | 25.5 | 2.0 | 10.0 | 27.0 | 6.0 | 14.5 |

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| 1 | 20.5 | 14.0 | 17.0 | 17.0 | 14.5 | 15.0 | 21.5 | 15.0 | 18.0 | 20.5 | 13.5 | 16.0 |
| 2 | 23.5 | 9.0 | 15.0 | 20.5 | 15.0 | 17.0 | 21.5 | 15.0 | 17.5 | 19.0 | 14.0 | 16.5 |
| 3 | 25.0 | 10.0 | 16.0 | 21.5 | 15.5 | 18.0 | 21.0 | 14.0 | 17.0 | 18.0 | 13.5 | 16.0 |
| 4 | 25.0 | 11.5 | 17.5 | 22.5 | 16.5 | 20.0 | 20.5 | 14.5 | 17.0 | 20.0 | 14.0 | 16.5 |
| 5 | 18.0 | 13.5 | 15.0 | 25.5 | 19.0 | 22.5 | 18.5 | 14.5 | 16.0 | 17.5 | 12.5 | 14.5 |
| 6 | 17.0 | 13.5 | 14.5 | 26.0 | 20.0 | 22.5 | 17.5 | 14.0 | 16.0 | 16.5 | 12.0 | 13.5 |
| 7 | 22.0 | 14.0 | 17.0 | 20.5 | 16.5 | 18.5 | 20.5 | 14.0 | 16.5 | 15.5 | 9.5 | 12.5 |
| 8 | 26.0 | 13.5 | 18.5 | 22.0 | 16.0 | 18.5 | 21.5 | 15.0 | 18.0 | 16.5 | 9.5 | 12.5 |
| 9 | 23.5 | 12.5 | 18.0 | 23.0 | 17.0 | 20.0 | 20.5 | 14.5 | 17.5 | 12.5 | 11.0 | 12.0 |
| 10 | 19.5 | 15.0 | 17.0 | 19.0 | 15.5 | 17.0 | 20.5 | 15.0 | 17.5 | 18.0 | 12.5 | 14.5 |
| 11 | 23.0 | 14.5 | 18.5 | 19.5 | 16.0 | 18.0 | 19.0 | 14.0 | 16.5 | 19.5 | 15.0 | 17.0 |
| 12 | 18.0 | 14.0 | 15.5 | 21.0 | 16.0 | 19.0 | 20.0 | 13.0 | 16.0 | 18.5 | 13.0 | 15.5 |
| 13 | 20.0 | 13.0 | 16.5 | 22.0 | 16.0 | 19.0 | 16.5 | 14.0 | 15.0 | 16.5 | 12.5 | 14.0 |
| 14 | 16.0 | 13.0 | 14.0 | 22.0 | 14.5 | 18.5 | 20.5 | 14.0 | 16.5 | 14.0 | 12.5 | 13.0 |
| 15 | 17.0 | 13.5 | 14.5 | 21.0 | 15.5 | 18.5 | 22.5 | 16.5 | 19.0 | 14.5 | 12.0 | 13.0 |
| 16 | 24.0 | 15.0 | 19.0 | 24.5 | 16.0 | 20.5 | 22.0 | 14.5 | 18.0 | 17.0 | 9.5 | 12.5 |
| 17 | 21.0 | 13.5 | 17.5 | 27.0 | 19.0 | 22.0 | 23.0 | 15.5 | 18.5 | 12.5 | 10.5 | 12.0 |
| 18 | 21.0 | 14.0 | 18.0 | 26.5 | 20.0 | 23.0 | 21.5 | 15.0 | 17.5 | 17.0 | 12.5 | 14.0 |
| 19 | 23.5 | 15.0 | 20.0 | 26.0 | 20.5 | 22.5 | 21.0 | 14.5 | 17.5 | 15.5 | 13.5 | 14.0 |
| 20 | 25.0 | 16.0 | 20.5 | 25.5 | 18.0 | 21.0 | 20.0 | 14.0 | 16.5 | 15.5 | 13.5 | 14.0 |
| 21 | 26.0 | 16.5 | 21.0 | 22.5 | 17.0 | 20.0 | 22.0 | 15.0 | 18.0 | 16.5 | 13.5 | 14.5 |
| 22 | 22.5 | 16.5 | 20.0 | 23.5 | 16.5 | 19.5 | 20.0 | 14.5 | 17.0 | 19.5 | 14.0 | 16.0 |
| 23 | 22.0 | 15.5 | 19.0 | 25.5 | 16.0 | 20.0 | 20.0 | 15.0 | 17.5 | 20.0 | 14.0 | 16.0 |
| 24 | 19.0 | 14.5 | 17.0 | 26.5 | 18.5 | 21.5 | 19.5 | 13.5 | 15.5 | 18.5 | 13.5 | 15.5 |
| 25 | 20.0 | 13.5 | 16.0 | 24.5 | 19.0 | 21.5 | 21.0 | 14.0 | 17.5 | 22.0 | 15.5 | 18.0 |
| 26 | 22.5 | 15.5 | 19.5 | 25.0 | 18.0 | 20.5 | 21.5 | 15.5 | 18.5 | 22.0 | 15.0 | 18.5 |
| 27 | 22.0 | 19.0 | 20.5 | 22.5 | 17.0 | 19.5 | 18.0 | 13.5 | 16.0 | 24.0 | 15.0 | 19.0 |
| 28 | 21.0 | 16.5 | 19.0 | 22.5 | 16.5 | 19.5 | 16.5 | 11.0 | 13.5 | 20.0 | 14.0 | 16.5 |
| 29 | 22.0 | 15.0 | 18.5 | 23.0 | 16.5 | 19.5 | 18.0 | 11.5 | 14.0 | 19.5 | 15.0 | 17.5 |
| 30 | 18.5 | 14.5 | 16.0 | 22.5 | 16.5 | 18.5 | 16.5 | 13.0 | 14.0 | 16.5 | 13.5 | 15.0 |
| 31 | --- | --- | --- | 22.5 | 15.5 | 19.0 | 20.0 | 13.5 | 16.0 | --- | --- | --- |
| MONTH | 26.0 | 9.0 | 17.5 | 27.0 | 14.5 | 19.5 | 23.0 | 11.0 | 17.0 | 24.0 | 9.5 | 15.0 |
| YEAR | 27.0 | .0 | 9.5 | | | | | | | | | |

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310) | CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916) | MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 1336 | 2.7 | -- | -- | -- | -- | <3.0 | 88 | 43 |
| FEB , 1986 | | | | | | | | | |
| 19... | 1140 | 2.6 | -- | 8.20 | 3.5 | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 1325 | 3.9 | 600 | 8.50 | 16.0 | -- | 2.5 | 76 | 43 |

| DATE | SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929) | POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE (MG/L AS SO4) (00946) | FLUO-RIDE, TOTAL (MG/L AS F) (00951) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | IRON (UG/L AS FE) (71885) | MANGA-NESE (UG/L AS MN) (71883) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 7.0 | 2.0 | 322 | -- | 16 | .1 | 16 | 2300 | 410 |
| FEB , 1986 | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 7.0 | 1.0 | 310 | 1.9 | 16 | .1 | 9.0 | 300 | 100 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | |
| 23... | 2245 | 4.6 | 1.7 | 1.60 | 6.0 | 1.89 | -- |
| 24... | 0345 | 6.1 | 1.6 | .290 | 1.8 | .580 | -- |
| 24... | 0745 | 5.5 | 1.7 | .520 | 2.2 | .540 | -- |
| 24... | 1145 | 4.5 | 1.9 | .630 | 2.3 | 1.14 | -- |
| 25... | 0840 | 3.0 | 2.3 | .150 | .90 | .260 | -- |
| NOV | | | | | | | |
| 01... | 0100 | 6.5 | 1.9 | 2.50 | 7.8 | 2.20 | -- |
| 01... | 0800 | 21 | 1.4 | .810 | 3.9 | 1.16 | -- |
| 01... | 1308 | 20 | 1.5 | .920 | 4.9 | 1.66 | -- |
| 01... | 1312 | 20 | 1.5 | .940 | 5.0 | 1.71 | -- |
| 01... | 1600 | 26 | 1.5 | .790 | 5.4 | 2.00 | -- |
| 01... | 1900 | 33 | 1.4 | .470 | 3.5 | 1.31 | -- |
| 02... | 0100 | 22 | 1.5 | .380 | 2.6 | .980 | -- |
| 02... | 0900 | 10 | 2.0 | .270 | 1.8 | .620 | -- |
| 02... | 2230 | 5.2 | 2.5 | .180 | 1.1 | .350 | -- |
| 18... | 1300 | 7.0 | 1.9 | 2.30 | 7.3 | 1.86 | -- |
| 18... | 2100 | 11 | 1.6 | .910 | 3.5 | 1.10 | -- |
| 19... | 0700 | 7.3 | 1.9 | .800 | 2.5 | .690 | -- |
| DEC | | | | | | | |
| 11... | 1336 | 2.7 | 2.5 | .200 | 1.2 | .300 | .049 |
| JAN , 1986 | | | | | | | |
| 14... | 1300 | 21 | 2.5 | .200 | .70 | .140 | .039 |
| FEB | | | | | | | |
| 19... | 1140 | 2.6 | 2.5 | .180 | .70 | .180 | .044 |
| MAR | | | | | | | |
| 10.. | 1122 | 6.8 | 2.0 | 1.60 | 4.6 | 1.10 | -- |
| 10... | 1500 | 9.9 | 2.0 | 2.20 | -- | -- | -- |
| 10... | 1800 | 9.6 | 2.2 | 2.30 | 7.0 | 1.78 | -- |
| 10... | 2100 | 8.0 | 2.3 | 2.10 | -- | -- | -- |
| 16... | 2000 | 8.2 | 2.1 | 1.90 | 5.4 | 1.41 | -- |
| 17... | 1945 | 9.3 | 2.1 | 1.80 | 5.0 | 1.40 | -- |
| 18... | 0445 | 11 | 2.2 | 2.20 | 6.1 | 1.61 | -- |
| 18... | 1145 | 15 | 2.2 | 1.70 | 5.6 | 1.72 | -- |
| 18... | 1345 | 17 | 2.1 | 1.80 | 6.7 | 1.91 | -- |
| 19... | 0905 | 14 | 2.1 | 1.00 | 4.4 | 1.76 | .510 |
| 19... | 2115 | 9.6 | 2.2 | .730 | 2.8 | .940 | -- |
| MAY | | | | | | | |
| 07... | 1325 | 3.9 | 1.5 | .020 | .40 | .080 | .039 |
| 15... | 1830 | 4.7 | 1.5 | 1.70 | 6.5 | 1.79 | -- |
| 15... | 2130 | 6.3 | 1.7 | .640 | 2.9 | .890 | -- |
| 16... | 0130 | 5.2 | 1.7 | .670 | 3.7 | 1.06 | -- |
| 16... | 0900 | 4.1 | 1.7 | .370 | 1.4 | .410 | -- |
| 17... | 1530 | 6.6 | 1.5 | 1.40 | 6.0 | 1.89 | -- |
| 17... | 1730 | 9.8 | 1.7 | .960 | 6.4 | 2.20 | -- |
| 17... | 1930 | 13 | 1.9 | .830 | 4.8 | 1.76 | -- |
| 17... | 2130 | 12 | 2.1 | .520 | 3.7 | 1.41 | -- |
| 18... | 0230 | 6.7 | 2.3 | .320 | 2.4 | .900 | -- |
| 18... | 1015 | 4.6 | 2.1 | .190 | 1.2 | .460 | -- |
| JUN | | | | | | | |
| 22... | 0630 | 5.4 | 1.4 | 1.10 | 3.4 | .790 | -- |
| 22... | 0830 | 7.9 | 1.6 | .550 | 2.0 | .600 | -- |
| 22... | 1230 | 7.1 | 2.6 | .580 | 2.2 | .620 | -- |
| 24... | 0900 | 3.3 | 1.7 | .020 | .50 | .190 | -- |
| 24... | 1630 | 3.5 | 3.5 | .530 | 2.6 | .540 | -- |

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|
| OCT , 1985 | | | |
| 04... | 1440 | 2.4 | 43 |
| 11... | 1458 | 2.7 | 77 |
| 12... | 0815 | 5.1 | 491 |
| 12... | 1015 | 7.6 | 326 |
| 12... | 1215 | 9.1 | 249 |
| 12... | 1515 | 8.0 | 206 |
| 12... | 1915 | 5.7 | 151 |
| 12... | 2315 | 4.6 | 117 |
| 18... | 0405 | 2.4 | 54 |
| 23... | 2045 | 4.4 | 209 |
| 24... | 0045 | 5.4 | 528 |
| 24... | 0445 | 6.1 | 127 |
| 24... | 0845 | 5.3 | 107 |
| 24... | 1245 | 4.3 | 85 |
| 27... | 0850 | 2.7 | 89 |
| 31... | 0605 | 2.6 | 62 |
| NOV | | | |
| 01... | 0200 | 8.0 | 323 |
| 01... | 0700 | 21 | 320 |
| 01... | 1100 | 18 | 201 |
| 01... | 1309 | 20 | 254 |
| 01... | 1310 | 20 | 262 |
| 01... | 1419 | 22 | 375 |
| 01... | 1420 | 22 | 390 |
| 01... | 1800 | 32 | 382 |
| 01... | 2400 | 24 | 201 |
| 02... | 1000 | 9.4 | 123 |
| 02... | 1600 | 6.3 | 133 |
| 03... | 0230 | 4.6 | 71 |
| 07... | 1436 | 3.5 | 37 |
| 12... | 0245 | 3.6 | 89 |
| 12... | 0945 | 3.6 | 84 |
| 12... | 2045 | 4.3 | 71 |
| 14... | 0738 | 5.7 | 62 |
| 18... | 1900 | 11 | 146 |
| 18... | 2300 | 11 | 178 |
| 19... | 0500 | 8.2 | 133 |
| 22... | 0813 | 3.1 | 61 |
| DEC | | | |
| 06... | 1544 | 3.0 | 356 |
| 11... | 1330 | 2.7 | 254 |
| 13... | 0840 | 3.6 | 99 |
| JAN , 1986 | | | |
| 24... | 0841 | 2.6 | 211 |
| FEB | | | |
| 06... | 1214 | 3.9 | 72 |
| 19... | 1140 | 2.6 | 82 |
| 20... | 1038 | 2.8 | 166 |
| 28... | 0728 | 2.8 | 121 |
| MAR | | | |
| 07... | 0732 | 3.9 | 423 |
| 10... | 1122 | 6.8 | 418 |
| 10... | 1400 | 8.9 | 637 |
| 10... | 1600 | 10 | 577 |
| MAR , 1986 | | | |
| 10... | 1900 | 8.8 | 423 |
| 11... | 0905 | 7.5 | 252 |
| 13... | 1641 | 4.5 | 288 |
| 16... | 1900 | 8.2 | 322 |
| 17... | 1845 | 9.3 | 326 |
| 17... | 2145 | 8.8 | 280 |
| 18... | 0345 | 11 | 307 |
| 18... | 0745 | 12 | 326 |
| 18... | 1245 | 16 | 523 |
| 18... | 1345 | 17 | 561 |
| 19... | 0905 | 14 | 986 |
| 19... | 0911 | 14 | 168 |
| 19... | 1715 | 14 | 493 |
| 20... | 1611 | 4.3 | 224 |
| 21... | 1040 | 3.4 | 312 |
| 27... | 1447 | 3.3 | 110 |
| APR | | | |
| 02... | 1706 | 3.0 | 107 |
| 11... | 0725 | 3.1 | 48 |
| 14... | 1545 | 3.0 | 410 |
| 18... | 0818 | 2.9 | 39 |
| 24... | 1024 | 2.8 | 47 |
| MAY | | | |
| 02... | 0808 | 3.1 | 41 |
| 07... | 1325 | 3.9 | 72 |
| 08... | 1831 | 3.6 | 11 |
| 14... | 0738 | 4.5 | 46 |
| 15... | 1930 | 5.5 | 139 |
| 15... | 2230 | 6.3 | 124 |
| 16... | 0230 | 4.8 | 95 |
| 16... | 0900 | 4.1 | 29 |
| 17... | 1430 | 6.1 | 307 |
| 17... | 1630 | 7.7 | 409 |
| 17... | 1830 | 12 | 353 |
| 17... | 1930 | 13 | 403 |
| 17... | 2030 | 12 | 422 |
| 18... | 0030 | 8.0 | 183 |
| 18... | 0430 | 5.7 | 118 |
| 18... | 1015 | 4.6 | 92 |
| 25... | 0817 | 2.4 | 223 |
| 31... | 0747 | 2.6 | 69 |
| JUN | | | |
| 07... | 0744 | 2.7 | 56 |
| 13... | 0726 | -- | 41 |
| 22... | 0530 | 4.4 | 124 |
| 22... | 0730 | 7.9 | 49 |
| 22... | 0800 | 7.9 | 36 |
| 22... | 1030 | 7.4 | 46 |
| 22... | 1430 | 6.7 | 39 |
| 22... | 1930 | 4.7 | 24 |
| 26... | 0737 | 3.3 | 23 |
| JUL | | | |
| 07... | 1850 | 4.5 | 466 |
| 12... | 0955 | 4.4 | 357 |

## 05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI

LOCATION.--Lat 44°51'16", long 89°40'43" in NW 1/4 SW 1/4 sec.4, T.7 N., R.7 E., Dane County, Hydrologic Unit 0707005, on left bank at bridge on Garfoot Road, 0.5 mi upstream from Black Earth Creek.

DRAINAGE AREA.--5 39 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 860 ft, from topographic map.

REMARKS.--Estimated daily discharges: July 1-7. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 128 ft$^3$/s July 25, 1985, gage height, 5.84 ft; minimum discharge, 2.9 ft$^3$/s July 5-8, 1985, gage height, 3.22 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft$^3$/s Nov. 1, gage height, 5.28 ft; minimum discharge, 4.3 ft$^3$/s Aug. 3-5; minimum gage height, 3.29 ft, Jan. 12.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 17 to Sept. 30.)

| | | | |
|---|---|---|---|
| 3.2 | 3.7 | 3.6 | 10 |
| 3.3 | 5.0 | 4.0 | 20 |
| 3.4 | 6.4 | 4.5 | 36 |
| 3.5 | 8.1 | 5.0 | 62 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.1 | 45 | 6.1 | 5.0 | 5.1 | 5.4 | 8.0 | 6.3 | 5.5 | 5.6 | 4.6 | 4.6 |
| 2 | 4.7 | 18 | 5.7 | 5.1 | 5.1 | 5.5 | 7.7 | 6.1 | 5.4 | 5.4 | 4.6 | 4.5 |
| 3 | 4.9 | 7.3 | 5.7 | 5.1 | 5.1 | 5.6 | 8.6 | 6.1 | 5.4 | 5.2 | 4.4 | 4.5 |
| 4 | 4.8 | 6.6 | 5.8 | 5.1 | 6.7 | 5.9 | 8.4 | 6.1 | 5.5 | 5.1 | 4.4 | 4.7 |
| 5 | 5.2 | 6.2 | 5.8 | 5.0 | 7.7 | 6.1 | 9.0 | 6.0 | 5.5 | 5.2 | 4.4 | 4.7 |
| 6 | 4.9 | 6.9 | 5.8 | 5.0 | 6.5 | 6.0 | 8.0 | 6.0 | 5.4 | 5.3 | 4.9 | 4.6 |
| 7 | 5.0 | 6.9 | 5.8 | 4.9 | 6.0 | 5.8 | 7.6 | 5.9 | 5.4 | 6.0 | 4.7 | 4.6 |
| 8 | 5.1 | 6.2 | 5.8 | 4.9 | 5.9 | 5.8 | 7.3 | 5.8 | 5.3 | 7.8 | 4.9 | 4.6 |
| 9 | 6.0 | 6.3 | 5.8 | 4.8 | 5.6 | 6.1 | 7.2 | 5.8 | 5.3 | 7.1 | 4.6 | 5.0 |
| 10 | 6.8 | 6.6 | 5.9 | 4.9 | 5.4 | 14 | 7.2 | 5.8 | 5.8 | 8.2 | 5.1 | 10 |
| 11 | 5.4 | 6.2 | 5.8 | 5.0 | 5.3 | 12 | 7.2 | 5.8 | 5.6 | 8.0 | 4.8 | 18 |
| 12 | 12 | 6.8 | 5.7 | 4.9 | 5.2 | 8.3 | 7.2 | 5.9 | 5.4 | 5.6 | 4.6 | 5.8 |
| 13 | 6.3 | 9.2 | 5.6 | 4.6 | 5.1 | 8.7 | 7.3 | 6.6 | 5.3 | 5.1 | 4.6 | 5.0 |
| 14 | 5.4 | 8.4 | 5.5 | 4.8 | 5.1 | 9.4 | 9.8 | 7.2 | 5.5 | 4.9 | 4.9 | 4.8 |
| 15 | 5.3 | 6.7 | 5.7 | 4.9 | 5.1 | 9.5 | 8.2 | 7.8 | 5.4 | 4.9 | 4.7 | 4.9 |
| 16 | 5.0 | 12 | 5.7 | 5.1 | 5.1 | 12 | 7.7 | 7.2 | 5.2 | 5.0 | 4.6 | 4.6 |
| 17 | 5.0 | 7.0 | 5.4 | 5.2 | 5.2 | 14 | 7.5 | 12 | 4.9 | 4.7 | 4.7 | 4.6 |
| 18 | 6.0 | 15 | 5.3 | 5.2 | 5.3 | 37 | 7.4 | 8.5 | 4.9 | 4.9 | 4.7 | 4.8 |
| 19 | 7.1 | 10 | 5.3 | 5.3 | 5.3 | 30 | 7.2 | 6.6 | 5.0 | 5.0 | 4.7 | 4.8 |
| 20 | 5.7 | 6.6 | 5.2 | 5.3 | 5.4 | 8.9 | 7.3 | 6.2 | 5.0 | 5.0 | 4.7 | 4.9 |
| 21 | 5.4 | 5.9 | 5.1 | 5.3 | 5.3 | 8.3 | 6.8 | 6.1 | 4.9 | 4.9 | 4.7 | 6.4 |
| 22 | 5.3 | 6.0 | 5.3 | 5.4 | 5.4 | 9.0 | 6.6 | 5.9 | 5.7 | 4.7 | 4.7 | 5.7 |
| 23 | 7.2 | 6.1 | 5.4 | 5.2 | 5.4 | 8.9 | 6.6 | 5.9 | 5.0 | 4.7 | 4.8 | 5.5 |
| 24 | 8.5 | 5.9 | 5.3 | 5.2 | 5.4 | 8.2 | 6.7 | 5.9 | 5.0 | 4.7 | 4.7 | 6.0 |
| 25 | 5.7 | 5.9 | 5.1 | 5.1 | 5.3 | 8.5 | 6.7 | 5.8 | 5.0 | 5.1 | 4.8 | 19 |
| 26 | 5.5 | 5.9 | 5.3 | 4.9 | 5.4 | 8.2 | 7.4 | 5.8 | 5.2 | 4.9 | 9.4 | 6.1 |
| 27 | 5.5 | 5.8 | 5.2 | 4.6 | 5.5 | 7.7 | 6.7 | 6.0 | 5.9 | 4.9 | 5.0 | 5.7 |
| 28 | 5.3 | 5.9 | 5.0 | 4.7 | 5.4 | 8.0 | 6.5 | 5.9 | 5.4 | 5.3 | 4.6 | 5.4 |
| 29 | 5.3 | 5.8 | 5.0 | 4.9 | --- | 8.1 | 6.5 | 5.8 | 5.6 | 4.8 | 4.6 | 7.4 |
| 30 | 5.3 | 5.8 | 5.0 | 4.9 | --- | 7.8 | 6.7 | 5.8 | 5.9 | 4.7 | 4.5 | 7.0 |
| 31 | 6.1 | --- | 5.1 | 4.9 | --- | 7.3 | --- | 5.7 | --- | 4.7 | 4.6 | --- |
| TOTAL | 180.8 | 262.9 | 170.2 | 155.2 | 154.3 | 306.0 | 223.0 | 198.3 | 160.3 | 167.4 | 150.0 | 188.2 |
| MEAN | 5.83 | 8.76 | 5.49 | 5.01 | 5.51 | 9.87 | 7.43 | 6.40 | 5.34 | 5.40 | 4.84 | 6.27 |
| MAX | 12 | 45 | 6.1 | 5.4 | 7.7 | 37 | 9.8 | 12 | 5.9 | 8.2 | 9.4 | 19 |
| MIN | 4.7 | 5.8 | 5.0 | 4.6 | 5.1 | 5.4 | 6.5 | 5.7 | 4.9 | 4.7 | 4.4 | 4.5 |

CAL YR 1985 TOTAL 2038.8 MEAN 5.59 MAX 81 MIN 2.9
WTR YR 1986 TOTAL 2316.6 MEAN 6.35 MAX 45 MIN 4.4

## 05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986.
TOTAL PHOSPHORUS DISCHARGE: October 1984 to June 1986.
TOTAL NITROGEN DISCHARGE: October 1984 to June 1986.
WATER TEMPERATURE: November 1984 to September 1986.
DISSOLVED OXYGEN: April 1984 to September 1985.

INSTRUMENTATION.--Water-quality sampler since December 1984. Continuous water temperature recorder since November 1984. Water-quality monitor since April 1984.

COOPERATION.--Water-sediment samples were collected by the U.S. Geological Survey; chemical analysis was performed by the Wisconsin State Laboratory of Hygiene; and suspended-sediment concentrations were determined by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 62 tons July 25, 1985; minimum daily, 0.13 ton Jan. 29, 1985.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 747 lb July 25, 1985; minimum daily, 1.13 lb Jan. 26 to Feb. 3, 1985.
TOTAL NITROGEN DISCHARGE: Maximum daily, 2,980 lb July 25, 1985; minimum daily, 49 lb Jan. 26 to Feb. 3, 1985.
WATER TEMPERATURE: Maximum observed, 24.5°C July 25, 1985; minimum observed, 0°C on several days during 1985 and 1986.
DISSOLVED OXYGEN: Maximum observed, 16.5 mg/L Apr. 11, 1985; minimum observed, 4.0 mg/L Sept. 5, 1985.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 30 tons Mar. 18; minimum daily, 0.27 ton Oct. 11, 16-17.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 323 lb Nov. 1; minimum daily, 1.73 lb Jan. 13.
TOTAL NITROGEN DISCHARGE: Maximum daily, 2,140 lb Mar. 18; minimum daily, 60 lb Jan. 13, June 18, 24-25.
WATER TEMPERATURE: Maximum observed, 21.5°C June 21, July 25; minimum observed, 0°C Jan. 26-27, Mar. 7.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .41 | 26 | 1.7 | .90 | .33 | 1.1 | .98 | .70 | 1.5 | | | |
| 2 | .40 | 4.8 | 1.5 | .82 | .35 | 1.0 | .68 | .69 | 1.4 | | | |
| 3 | .41 | 1.5 | 1.5 | .74 | .38 | .88 | 1.2 | .65 | 1.4 | | | |
| 4 | .42 | 1.2 | 1.5 | .65 | .99 | .80 | 1.1 | .62 | 1.4 | | | |
| 5 | .42 | 1.1 | 1.5 | .58 | 1.4 | .71 | 1.4 | .58 | 1.3 | | | |
| 6 | .37 | 1.3 | 1.5 | .59 | .60 | .61 | .52 | .54 | 1.3 | | | |
| 7 | .34 | 1.3 | 1.4 | .60 | .60 | .52 | .45 | .51 | 1.3 | | | |
| 8 | .32 | .94 | 1.3 | .62 | .64 | .51 | .40 | .50 | 1.3 | | | |
| 9 | 1.0 | 1.0 | 1.2 | .64 | .67 | .73 | .36 | .50 | 1.3 | | | |
| 10 | 1.3 | 1.1 | 1.1 | .69 | .71 | 15 | .34 | .50 | 1.7 | | | |
| 11 | .27 | 1.1 | 1.0 | .73 | .76 | 4.9 | .31 | .50 | 1.5 | | | |
| 12 | 10 | 1.3 | 1.0 | .73 | .80 | 2.8 | .31 | .51 | 1.4 | | | |
| 13 | .78 | 2.3 | 1.0 | .65 | .87 | 1.9 | .31 | 2.9 | 1.4 | | | |
| 14 | .29 | 1.3 | 1.0 | .65 | .90 | 2.4 | 3.9 | 3.0 | 1.5 | | | |
| 15 | .28 | .91 | 1.1 | .63 | .77 | 2.4 | 2.2 | 5.4 | 1.5 | | | |
| 16 | .27 | 3.6 | 1.1 | .62 | .65 | 7.6 | 1.9 | 2.9 | 1.6 | | | |
| 17 | .27 | .95 | 1.0 | .59 | .56 | 7.7 | 1.8 | 10 | 1.5 | | | |
| 18 | 1.1 | 11 | 1.1 | .57 | .48 | 30 | 1.7 | 3.1 | 1.6 | | | |
| 19 | 1.5 | 3.2 | 1.1 | .55 | .43 | 18 | 1.4 | 1.9 | 1.7 | | | |
| 20 | .53 | 1.9 | 1.1 | .56 | .56 | 1.8 | 1.2 | 1.8 | 1.8 | | | |
| 21 | .48 | 1.8 | 1.1 | .58 | .63 | 1.2 | 1.0 | 1.7 | 1.8 | | | |
| 22 | .45 | 1.8 | 1.1 | .60 | .71 | 1.2 | .85 | 1.7 | 2.1 | | | |
| 23 | 3.1 | 1.8 | 1.2 | .60 | .80 | 1.1 | .74 | 1.6 | 1.7 | | | |
| 24 | 3.2 | 1.8 | 1.2 | .60 | .88 | .99 | .66 | 1.6 | 1.5 | | | |
| 25 | .71 | 1.7 | 1.2 | .53 | .98 | .98 | .67 | 1.6 | 1.4 | | | |
| 26 | .92 | 1.7 | 1.2 | .45 | 1.1 | .91 | .77 | 1.6 | 1.4 | | | |
| 27 | 1.1 | 1.7 | 1.3 | .38 | 1.3 | .82 | .69 | 1.6 | 1.8 | | | |
| 28 | .85 | 1.7 | 1.3 | .34 | 1.3 | .82 | .68 | 1.6 | 1.8 | | | |
| 29 | .69 | 1.6 | 1.2 | .32 | --- | .81 | .70 | 1.6 | 2.2 | | | |
| 30 | .55 | 1.6 | 1.1 | .28 | --- | .76 | .73 | 1.6 | 2.6 | | | |
| 31 | 1.7 | --- | 1.0 | .30 | --- | .69 | --- | 1.5 | --- | | | |
| TOTAL | 34.43 | 85.00 | 37.6 | 18.09 | 21.15 | 111.64 | 29.95 | 55.50 | 47.7 | | | |

WTR YR 1986 TOTAL 441.06

## 05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.47 | 323 | 6.68 | 1.89 | 2.29 | 2.93 | 12.00 | 2.13 | 2.40 | | | |
| 2 | 2.30 | 61.00 | 2.17 | 1.92 | 2.33 | 2.97 | 3.27 | 2.07 | 2.35 | | | |
| 3 | 2.36 | 7.91 | 2.17 | 1.94 | 2.35 | 3.02 | 14.00 | 2.04 | 2.33 | | | |
| 4 | 2.36 | 4.17 | 2.19 | 1.92 | 7.47 | 3.18 | 3.54 | 2.03 | 2.36 | | | |
| 5 | 2.50 | 3.02 | 2.19 | 1.90 | 11.00 | 3.29 | 16.00 | 1.99 | 2.36 | | | |
| 6 | 2.40 | 3.35 | 2.19 | 1.89 | 3.09 | 3.24 | 3.32 | 1.95 | 2.33 | | | |
| 7 | 2.43 | 8.66 | 2.21 | 1.86 | 2.87 | 3.13 | 3.14 | 1.91 | 2.33 | | | |
| 8 | 2.47 | 3.01 | 2.19 | 1.84 | 2.85 | 3.11 | 2.99 | 1.89 | 2.29 | | | |
| 9 | 4.58 | 3.08 | 2.19 | 1.81 | 2.73 | 5.92 | 2.92 | 1.88 | 2.29 | | | |
| 10 | 8.40 | 3.19 | 2.22 | 1.86 | 2.68 | 94.00 | 2.90 | 1.88 | 5.59 | | | |
| 11 | 2.63 | 3.03 | 2.19 | 1.89 | 2.66 | 55.00 | 2.88 | 1.89 | 2.41 | | | |
| 12 | 28.00 | 3.30 | 2.16 | 1.85 | 2.60 | 23.00 | 2.84 | 1.91 | 2.33 | | | |
| 13 | 7.14 | 16.00 | 2.12 | 1.73 | 2.59 | 5.94 | 2.84 | 7.68 | 2.30 | | | |
| 14 | 2.62 | 13.00 | 2.08 | 1.81 | 2.62 | 18.00 | 20.00 | 9.50 | 2.37 | | | |
| 15 | 2.56 | 3.26 | 2.14 | 1.87 | 2.65 | 18.00 | 3.18 | 23.00 | 2.34 | | | |
| 16 | 2.44 | 28.00 | 2.14 | 1.96 | 2.67 | 46.00 | 2.95 | 15.00 | 2.25 | | | |
| 17 | 2.43 | 3.45 | 2.04 | 2.01 | 2.76 | 61.00 | 2.85 | 73.00 | 2.12 | | | |
| 18 | 13.00 | 91.00 | 2.02 | 2.06 | 2.83 | 288 | 2.79 | 24.00 | 2.12 | | | |
| 19 | 17.00 | 23.00 | 2.00 | 2.11 | 2.85 | 192 | 2.69 | 4.88 | 2.16 | | | |
| 20 | 3.76 | 5.13 | 1.97 | 2.13 | 2.92 | 35.00 | 9.28 | 2.67 | 2.15 | | | |
| 21 | 2.62 | 2.46 | 1.94 | 2.16 | 2.85 | 18.00 | 2.50 | 2.64 | 2.12 | | | |
| 22 | 2.60 | 2.28 | 2.02 | 2.20 | 2.92 | 16.00 | 2.41 | 2.56 | 5.36 | | | |
| 23 | 28.00 | 2.30 | 2.04 | 2.16 | 2.92 | 15.00 | 2.39 | 2.55 | 2.17 | | | |
| 24 | 36.00 | 2.23 | 2.00 | 2.17 | 2.89 | 4.18 | 2.39 | 2.55 | 2.15 | | | |
| 25 | 5.43 | 2.23 | 1.93 | 2.16 | 2.87 | 4.23 | 2.39 | 2.51 | 2.16 | | | |
| 26 | 2.91 | 2.23 | 1.99 | 2.10 | 2.93 | 4.00 | 9.60 | 2.51 | 2.23 | | | |
| 27 | 2.66 | 2.20 | 1.98 | 1.99 | 2.96 | 3.68 | 2.34 | 2.58 | 5.83 | | | |
| 28 | 2.58 | 2.22 | 1.91 | 2.04 | 2.89 | 3.72 | 2.26 | 2.54 | 2.33 | | | |
| 29 | 2.58 | 2.19 | 1.89 | 2.16 | --- | 3.68 | 2.26 | 2.51 | 2.43 | | | |
| 30 | 2.57 | 2.19 | 1.91 | 2.17 | --- | 3.48 | 2.30 | 2.49 | 5.83 | | | |
| 31 | 8.80 | --- | 1.92 | 2.19 | --- | 3.17 | --- | 2.46 | --- | | | |
| TOTAL | 210.60 | 632.09 | 68.79 | 61.75 | 90.04 | 945.87 | 147.22 | 211.20 | 81.77 | | | |

WTR YR 1986 TOTAL 2449.33

### NITROGEN, TOTAL, LOAD POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 69.0 | 1200 | 100.0 | 64.0 | 72.0 | 78.0 | 157 | 74.0 | 72.0 | | | |
| 2 | 64.0 | 401 | 74.0 | 65.0 | 73.0 | 79.0 | 113 | 72.0 | 70.0 | | | |
| 3 | 66.0 | 120 | 74.0 | 66.0 | 73.0 | 79.0 | 178 | 71.0 | 70.0 | | | |
| 4 | 65.0 | 89.0 | 75.0 | 65.0 | 115 | 83.0 | 170 | 71.0 | 70.0 | | | |
| 5 | 70.0 | 84.0 | 74.0 | 65.0 | 147 | 85.0 | 193 | 69.0 | 70.0 | | | |
| 6 | 67.0 | 118 | 74.0 | 65.0 | 95.0 | 83.0 | 115 | 68.0 | 69.0 | | | |
| 7 | 67.0 | 118 | 74.0 | 64.0 | 88.0 | 80.0 | 109 | 67.0 | 69.0 | | | |
| 8 | 68.0 | 84.0 | 74.0 | 63.0 | 87.0 | 79.0 | 104 | 67.0 | 67.0 | | | |
| 9 | 98.0 | 85.0 | 73.0 | 62.0 | 83.0 | 84.0 | 101 | 68.0 | 67.0 | | | |
| 10 | 116 | 89.0 | 74.0 | 64.0 | 81.0 | 532 | 100.0 | 70.0 | 87.0 | | | |
| 11 | 73.0 | 84.0 | 73.0 | 65.0 | 80.0 | 297 | 100.0 | 72.0 | 70.0 | | | |
| 12 | 168 | 92.0 | 72.0 | 64.0 | 78.0 | 121 | 99.0 | 74.0 | 68.0 | | | |
| 13 | 85.0 | 171 | 71.0 | 60.0 | 77.0 | 182 | 99.0 | 109 | 67.0 | | | |
| 14 | 73.0 | 152 | 69.0 | 62.0 | 77.0 | 208 | 217 | 127 | 68.0 | | | |
| 15 | 71.0 | 91.0 | 71.0 | 64.0 | 78.0 | 212 | 110 | 178 | 67.0 | | | |
| 16 | 68.0 | 242 | 72.0 | 67.0 | 78.0 | 348 | 102 | 118 | 65.0 | | | |
| 17 | 67.0 | 95.0 | 68.0 | 68.0 | 80.0 | 425 | 99.0 | 292 | 61.0 | | | |
| 18 | 121 | 381 | 68.0 | 70.0 | 82.0 | 2140 | 97.0 | 162 | 60.0 | | | |
| 19 | 140 | 204 | 67.0 | 71.0 | 82.0 | 1380 | 93.0 | 93.0 | 61.0 | | | |
| 20 | 77.0 | 108 | 66.0 | 71.0 | 83.0 | 277 | 94.0 | 83.0 | 61.0 | | | |
| 21 | 73.0 | 80.0 | 65.0 | 72.0 | 81.0 | 146 | 87.0 | 82.0 | 60.0 | | | |
| 22 | 72.0 | 81.0 | 68.0 | 73.0 | 82.0 | 144 | 84.0 | 79.0 | 85.0 | | | |
| 23 | 171 | 81.0 | 69.0 | 71.0 | 82.0 | 143 | 83.0 | 79.0 | 61.0 | | | |
| 24 | 204 | 79.0 | 67.0 | 71.0 | 80.0 | 130 | 83.0 | 78.0 | 60.0 | | | |
| 25 | 85.0 | 78.0 | 65.0 | 71.0 | 79.0 | 133 | 83.0 | 77.0 | 60.0 | | | |
| 26 | 75.0 | 78.0 | 67.0 | 68.0 | 80.0 | 128 | 133 | 77.0 | 62.0 | | | |
| 27 | 74.0 | 77.0 | 67.0 | 64.0 | 80.0 | 119 | 81.0 | 79.0 | 90.0 | | | |
| 28 | 72.0 | 77.0 | 65.0 | 66.0 | 78.0 | 122 | 79.0 | 77.0 | 65.0 | | | |
| 29 | 72.0 | 76.0 | 64.0 | 69.0 | --- | 123 | 79.0 | 76.0 | 67.0 | | | |
| 30 | 71.0 | 76.0 | 65.0 | 69.0 | --- | 118 | 80.0 | 75.0 | 90.0 | | | |
| 31 | 103 | --- | 65.0 | 70.0 | --- | 109 | --- | 74.0 | --- | | | |
| TOTAL | 2765.0 | 4791.0 | 2190.0 | 2069.0 | 2351.0 | 8267.0 | 3322.0 | 2858.0 | 2059.0 | | | |

WTR YR 1986 TOTAL 30672.0

## 05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 11.5 | 7.0 | 11.0 | 10.0 | 9.0 | 9.5 | 5.0 | 2.5 | 3.5 | 5.5 | 3.0 | 4.0 |
| 2 | 12.5 | 9.0 | 10.5 | 9.0 | 8.5 | 8.5 | 3.5 | 2.0 | 2.5 | 5.0 | 3.0 | 4.0 |
| 3 | 13.0 | 10.0 | 11.0 | 8.5 | 8.0 | 8.5 | 4.5 | 2.0 | 3.0 | 5.5 | 3.5 | 4.5 |
| 4 | 12.0 | 10.5 | 11.0 | 9.5 | 7.5 | 8.5 | 5.5 | 4.0 | 4.5 | 5.0 | 3.5 | 4.5 |
| 5 | 11.0 | 9.5 | 10.5 | 8.5 | 7.0 | 7.5 | 5.0 | 3.5 | 4.5 | 4.0 | 2.5 | 3.5 |
| 6 | 12.0 | 9.0 | 10.0 | 8.5 | 7.5 | 8.0 | 5.0 | 2.5 | 3.5 | 4.0 | 1.5 | 2.5 |
| 7 | 12.5 | 9.0 | 10.5 | 9.0 | 7.5 | 9.0 | 5.5 | 3.5 | 4.5 | 3.5 | 1.0 | 2.0 |
| 8 | 12.5 | 10.5 | 11.5 | 8.5 | 6.5 | 7.5 | 5.5 | 3.5 | 4.5 | 3.5 | 1.0 | 2.0 |
| 9 | 11.5 | 10.0 | 10.5 | 6.5 | 5.5 | 6.0 | 6.0 | 5.0 | 5.5 | 5.0 | 2.5 | 3.5 |
| 10 | 11.5 | 9.5 | 10.5 | 6.5 | 5.5 | 6.0 | 6.0 | 5.0 | 5.5 | 5.5 | 4.0 | 4.5 |
| 11 | 11.5 | 9.0 | 10.0 | 7.0 | 5.5 | 6.5 | 5.5 | 3.5 | 4.5 | 6.5 | 4.5 | 5.0 |
| 12 | 12.5 | 10.5 | 11.5 | 7.5 | 6.5 | 7.0 | 4.0 | 2.0 | 3.0 | 4.5 | 2.5 | 4.0 |
| 13 | 13.0 | 10.5 | 11.5 | 7.0 | 6.5 | 6.5 | 3.5 | 2.0 | 2.5 | 4.0 | 2.5 | 3.0 |
| 14 | 12.0 | 10.5 | 11.0 | 7.0 | 6.0 | 6.5 | 3.5 | 1.5 | 2.5 | --- | --- | --- |
| 15 | 12.0 | 9.5 | 10.5 | 7.5 | 6.0 | 7.0 | 4.5 | 3.5 | 4.0 | 5.5 | 3.0 | 4.5 |
| 16 | 11.5 | 8.5 | 10.0 | 7.0 | 6.0 | 6.5 | 4.0 | 2.0 | 3.0 | 6.5 | 2.0 | 4.5 |
| 17 | 11.5 | 9.5 | 10.5 | 8.5 | 6.5 | 7.5 | 3.5 | 1.0 | 2.5 | 7.0 | 4.5 | 5.5 |
| 18 | 11.5 | 11.0 | 11.0 | 10.0 | 8.0 | 8.5 | 3.5 | 1.5 | 2.5 | 6.5 | 5.5 | 5.5 |
| 19 | 11.5 | 10.5 | 11.0 | 9.5 | 6.0 | 8.0 | 4.0 | 1.5 | 2.5 | 6.5 | 5.0 | 5.5 |
| 20 | 11.0 | 10.5 | 10.5 | 6.0 | 4.0 | 5.0 | 4.0 | 1.5 | 2.5 | 6.0 | 5.0 | 5.5 |
| 21 | 11.5 | 10.5 | 10.5 | 6.0 | 4.5 | 5.0 | 4.0 | 1.5 | 3.0 | 7.0 | 5.0 | 5.5 |
| 22 | 12.0 | 10.0 | 11.0 | 6.5 | 5.0 | 5.5 | 5.5 | 3.0 | 4.5 | 6.0 | 3.0 | 4.5 |
| 23 | 11.5 | 11.0 | 11.5 | 5.5 | 4.0 | 5.0 | 5.0 | 3.5 | 5.0 | 6.0 | 2.0 | 4.0 |
| 24 | 12.0 | 9.5 | 11.0 | 5.0 | 3.5 | 4.5 | 3.0 | 1.5 | 2.5 | 5.5 | 4.0 | 4.5 |
| 25 | 11.5 | 8.5 | 10.0 | 6.0 | 4.5 | 5.0 | 3.0 | 1.5 | 2.0 | 5.0 | 3.0 | 4.0 |
| 26 | 12.5 | 9.5 | 10.5 | 6.5 | 4.5 | 6.0 | 4.5 | 1.5 | 3.0 | 3.5 | .0 | 1.0 |
| 27 | 11.0 | 8.5 | 10.0 | 5.5 | 4.0 | 4.5 | 4.0 | 2.0 | 3.0 | 3.0 | .0 | 1.5 |
| 28 | 11.0 | 8.0 | 9.0 | 6.0 | 4.0 | 5.0 | 4.0 | 2.0 | 3.0 | 4.5 | 2.0 | 3.0 |
| 29 | 10.5 | 8.5 | 9.5 | 4.5 | 3.5 | 4.0 | 4.5 | 2.5 | 3.5 | 4.0 | 1.0 | 2.5 |
| 30 | 10.5 | 8.0 | 9.0 | 5.5 | 4.5 | 5.0 | 5.0 | 2.5 | 4.0 | 5.0 | 1.0 | 3.5 |
| 31 | 10.0 | 8.0 | 9.0 | --- | --- | --- | 4.5 | 3.0 | 3.5 | 5.0 | 4.0 | 4.5 |
| MONTH | 13.0 | 7.0 | 10.5 | 10.0 | 3.5 | 6.5 | 6.0 | 1.0 | 3.5 | 7.0 | .0 | 4.0 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | 6.0 | 4.5 | 5.5 | 7.5 | 2.5 | 4.0 | 14.5 | 8.0 | 11.0 | 14.0 | 9.0 | 11.0 |
| 2 | 6.5 | 5.5 | 6.0 | 7.5 | 4.0 | 5.5 | 14.5 | 7.0 | 10.0 | 15.5 | 8.5 | 11.0 |
| 3 | 6.0 | 5.0 | 5.5 | 8.0 | 3.5 | 5.5 | 9.0 | 8.0 | 8.5 | 17.0 | 7.0 | 11.5 |
| 4 | 5.0 | 2.5 | 4.0 | 7.5 | 3.0 | 5.0 | 11.5 | 7.5 | 10.5 | 18.5 | 9.0 | 13.0 |
| 5 | 4.0 | 2.5 | 3.5 | 6.0 | 2.5 | 4.5 | 15.0 | 9.0 | 11.0 | 17.0 | 11.0 | 13.0 |
| 6 | 4.5 | 2.0 | 3.5 | 6.5 | .5 | 3.5 | 12.0 | 9.0 | 10.0 | 18.5 | 11.5 | 14.5 |
| 7 | 6.0 | 2.5 | 4.0 | 6.5 | .0 | 2.5 | 18.5 | 7.5 | 11.5 | 17.0 | 9.5 | 12.5 |
| 8 | 6.5 | 2.0 | 4.5 | 6.5 | 2.0 | 4.5 | 12.5 | 7.0 | 9.5 | 18.0 | 9.5 | 13.0 |
| 9 | 4.5 | 1.0 | 2.5 | 7.5 | 4.5 | 5.5 | 14.0 | 6.5 | 9.5 | 18.5 | 9.5 | 13.5 |
| 10 | 5.0 | .5 | 2.0 | 5.5 | .5 | 2.5 | 13.5 | 6.0 | 8.5 | 18.0 | 10.0 | 13.5 |
| 11 | 5.5 | .5 | 2.0 | 6.0 | 1.0 | 3.0 | 15.0 | 5.5 | 9.5 | 13.5 | 11.5 | 12.5 |
| 12 | 5.0 | 1.0 | 2.0 | 4.5 | 2.0 | 3.0 | 10.0 | 7.0 | 8.5 | 16.0 | 11.5 | 13.5 |
| 13 | 4.0 | 1.0 | 2.5 | 5.0 | 2.5 | 3.5 | 14.0 | 8.0 | 10.5 | 13.5 | 10.5 | 12.0 |
| 14 | 6.0 | 1.0 | 3.5 | 4.5 | 3.0 | 3.5 | 9.0 | 7.0 | 8.0 | 15.5 | 11.5 | 13.0 |
| 15 | 5.0 | .5 | 3.0 | 5.5 | 2.5 | 4.0 | 11.0 | 6.5 | 8.0 | 14.0 | 10.5 | 12.5 |
| 16 | --- | --- | --- | 7.0 | 2.0 | 3.5 | 14.5 | 7.0 | 10.0 | 16.5 | 12.0 | 13.5 |
| 17 | --- | --- | --- | 5.5 | 2.5 | 3.5 | 15.5 | 7.0 | 10.5 | 13.5 | 12.0 | 13.0 |
| 18 | --- | --- | --- | 3.0 | 1.0 | 2.0 | 14.0 | 7.5 | 10.5 | 16.0 | 11.0 | 13.0 |
| 19 | 6.5 | 5.5 | 6.0 | 5.0 | .5 | 2.5 | 13.5 | 9.0 | 11.0 | 13.5 | 10.0 | 11.5 |
| 20 | 5.5 | 2.0 | 4.0 | 6.5 | 1.0 | 3.5 | 14.5 | 8.5 | 10.5 | 16.5 | 9.0 | 12.0 |
| 21 | 6.5 | 1.5 | 3.5 | 9.0 | 2.0 | 5.0 | 10.5 | 6.5 | 8.0 | 17.0 | 9.0 | 12.5 |
| 22 | 6.0 | 2.5 | 4.0 | 7.5 | 2.5 | 5.0 | 14.0 | 5.5 | 9.0 | 13.0 | 10.0 | 11.5 |
| 23 | 6.0 | 2.5 | 4.5 | 10.0 | 3.5 | 6.0 | 15.0 | 6.0 | 10.0 | 15.5 | 9.5 | 12.0 |
| 24 | 7.0 | 2.0 | 3.5 | 9.0 | 3.0 | 5.5 | 17.0 | 8.0 | 12.0 | 14.5 | 10.0 | 12.0 |
| 25 | 6.5 | 1.5 | 3.5 | 13.0 | 5.5 | 9.0 | 18.0 | 9.5 | 13.0 | 18.0 | 10.5 | 13.5 |
| 26 | 6.0 | 2.5 | 4.5 | 12.0 | 5.0 | 9.0 | 17.0 | 11.5 | 14.0 | 15.5 | 11.5 | 13.0 |
| 27 | 6.0 | .5 | 3.0 | 13.0 | 5.0 | 8.5 | 19.0 | 11.5 | 14.5 | 14.5 | 11.5 | 12.5 |
| 28 | 6.0 | .5 | 3.0 | 15.5 | 6.5 | 10.5 | 13.0 | 10.0 | 11.5 | 16.0 | 11.5 | 13.0 |
| 29 | --- | --- | --- | 18.5 | 9.5 | 13.0 | 16.5 | 8.5 | 12.0 | 17.5 | 11.5 | 13.5 |
| 30 | --- | --- | --- | 15.0 | 9.5 | 12.5 | 14.0 | 11.0 | 12.5 | 19.5 | 11.5 | 14.5 |
| 31 | --- | --- | --- | 17.5 | 8.5 | 12.5 | --- | --- | --- | 20.0 | 11.5 | 15.0 |
| MONTH | 7.0 | .5 | 3.5 | 18.5 | .0 | 5.5 | 19.0 | 5.5 | 10.5 | 20.0 | 7.0 | 13.0 |

05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 16.0 | 11.5 | 14.0 | 14.5 | 11.5 | 12.5 | 19.5 | 11.5 | 14.5 | 16.5 | 11.0 | 13.0 |
| 2 | 17.5 | 9.5 | 13.0 | 18.0 | 12.0 | 14.5 | 17.5 | 12.0 | 14.5 | 16.5 | 11.0 | 13.5 |
| 3 | 14.5 | 14.5 | 14.5 | 18.5 | 11.0 | 14.5 | 18.0 | 11.5 | 14.0 | 14.0 | 12.0 | 13.0 |
| 4 | --- | --- | --- | 20.0 | 12.5 | 16.0 | 17.0 | 11.0 | 14.0 | 16.5 | 12.0 | 14.0 |
| 5 | 14.0 | 12.0 | 13.5 | 21.5 | 13.5 | 17.0 | 17.5 | 11.0 | 13.5 | 15.0 | 10.0 | 12.5 |
| 6 | 14.0 | 12.0 | 13.0 | 18.5 | 13.5 | 15.5 | 14.5 | 12.0 | 13.5 | 13.5 | 10.0 | 11.5 |
| 7 | 18.5 | 12.0 | 14.0 | 15.5 | 12.5 | 14.0 | 16.5 | 13.0 | 14.5 | 14.0 | 9.0 | 11.0 |
| 8 | 20.0 | 11.0 | 14.5 | 17.5 | 13.5 | 15.0 | 19.5 | 12.0 | 15.0 | 15.0 | 8.5 | 11.5 |
| 9 | 20.5 | 11.0 | 14.5 | 20.0 | 13.5 | 15.5 | 17.0 | 11.5 | 14.0 | 12.5 | 9.0 | 10.5 |
| 10 | 17.5 | 12.0 | 14.5 | 16.5 | 12.0 | 14.0 | 18.0 | 11.5 | 14.5 | 15.5 | 12.5 | 14.5 |
| 11 | 18.0 | 13.5 | 16.0 | 18.0 | 14.5 | 16.0 | 17.5 | 11.0 | 14.0 | 17.0 | 14.0 | 16.0 |
| 12 | 15.5 | 12.0 | 13.5 | 19.0 | 13.5 | 15.5 | 17.5 | 11.0 | 13.5 | 15.5 | 12.0 | 14.0 |
| 13 | 18.0 | 11.5 | 14.0 | 14.0 | 14.0 | 14.0 | 13.5 | 11.5 | 12.5 | 14.0 | 11.0 | 12.5 |
| 14 | 14.5 | 10.5 | 12.5 | --- | --- | --- | 18.0 | 11.5 | 14.5 | 12.5 | 11.5 | 12.0 |
| 15 | 15.5 | 11.5 | 13.5 | --- | --- | --- | 18.5 | 13.0 | 15.0 | 12.5 | 11.0 | 11.5 |
| 16 | 19.5 | 12.0 | 15.5 | --- | --- | --- | 19.0 | 11.5 | 15.0 | 14.0 | 9.5 | 11.5 |
| 17 | 19.0 | 11.0 | 14.5 | --- | --- | --- | 19.0 | 12.0 | 14.5 | 11.5 | 9.5 | 11.0 |
| 18 | 20.0 | 11.5 | 14.5 | --- | --- | --- | 18.5 | 11.5 | 14.0 | 14.0 | 11.5 | 12.0 |
| 19 | 19.0 | 12.5 | 15.5 | --- | --- | --- | 18.0 | 12.0 | 14.5 | 13.0 | 11.5 | 12.0 |
| 20 | 19.5 | 12.5 | 15.0 | --- | --- | --- | 17.5 | 11.0 | 13.5 | 13.0 | 11.5 | 12.0 |
| 21 | 21.5 | 12.0 | 16.0 | --- | --- | --- | 18.5 | 11.5 | 14.5 | 14.5 | 12.0 | 13.0 |
| 22 | 19.0 | 13.5 | 15.5 | --- | --- | --- | 18.0 | 11.5 | 14.5 | 15.0 | 13.0 | 14.0 |
| 23 | 19.5 | 11.5 | 15.0 | 20.5 | 13.5 | 18.0 | 16.5 | 12.5 | 14.5 | 15.0 | 12.0 | 13.5 |
| 24 | 18.0 | 11.5 | 14.0 | 20.5 | 13.5 | 17.0 | 17.0 | 10.5 | 13.0 | 15.5 | 11.5 | 13.0 |
| 25 | 19.0 | 11.5 | 14.0 | 19.5 | 14.5 | 16.0 | 17.0 | 12.0 | 14.0 | 18.5 | 15.0 | 17.0 |
| 26 | 21.0 | 12.0 | 16.0 | 18.5 | 12.5 | 15.5 | 19.0 | 11.5 | 15.0 | 18.0 | 14.0 | 15.5 |
| 27 | 19.5 | 15.0 | 16.5 | 19.0 | 12.5 | 15.5 | 15.0 | 10.0 | 13.5 | 17.5 | 13.5 | 15.0 |
| 28 | 17.5 | 12.0 | 14.5 | 18.0 | 12.0 | 15.5 | 15.5 | 9.5 | 12.0 | 15.5 | 12.5 | 13.5 |
| 29 | 19.5 | 12.5 | 15.0 | 19.5 | 12.0 | 15.0 | 15.5 | 10.0 | 12.5 | 16.0 | 13.5 | 15.0 |
| 30 | 14.5 | 11.5 | 13.0 | 17.0 | 12.5 | 14.5 | 14.0 | 11.0 | 12.5 | 14.0 | 13.0 | 13.5 |
| 31 | --- | --- | --- | 18.5 | 12.5 | 15.0 | 16.5 | 11.0 | 13.5 | --- | --- | --- |
| MONTH | 21.5 | 9.5 | 14.5 | 21.5 | 11.0 | 15.5 | 19.5 | 9.5 | 14.0 | 18.5 | 8.5 | 13.0 |
| YEAR | 21.5 | .0 | 9.5 | | | | | | | | | |

### 05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310) | CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916) | MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 1100 | 5.7 | -- | -- | -- | -- | <3.0 | 67 | 36 |
| FEB , 1986 | | | | | | | | | |
| 19... | 1405 | 5.3 | -- | 8.30 | 6.5 | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 1410 | 5.9 | -- | 8.20 | 16.0 | -- | 2.8 | 61 | 37 |

| DATE | SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929) | POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE (MG/L AS SO4) (00946) | FLUO-RIDE, TOTAL (MG/L AS F) (00951) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | IRON (UG/L AS FE) (71885) | MANGA-NESE (UG/L AS MN) (71883) |
|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | |
| 11... | 5.0 | 1.0 | 270 | -- | 13 | .1 | 10 | 400 | 90 |
| FEB , 1986 | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 4.0 | <1.0 | 270 | 3.3 | 15 | .1 | 9.1 | 300 | 80 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | |
| 19... | 0300 | 8.8 | 1.7 | .760 | 3.2 | .690 | -- |
| 19... | 0500 | 8.6 | 1.8 | .500 | 2.8 | .640 | -- |
| 23... | 2045 | 13 | 1.9 | .770 | 5.6 | 1.59 | -- |
| 23... | 2345 | 17 | 1.8 | 1.10 | 6.5 | 1.90 | -- |
| 24... | 0245 | 13 | 1.9 | .510 | 3.5 | 1.09 | -- |
| 24... | 0545 | 9.8 | 2.0 | .360 | 2.8 | .780 | -- |
| 25... | 0805 | 5.7 | 2.1 | .070 | .90 | .180 | -- |
| 31... | 2330 | 13 | 2.0 | .410 | 3.9 | 1.17 | -- |
| NOV | | | | | | | |
| 01... | 0330 | 30 | 1.9 | .460 | 4.0 | 1.47 | -- |
| 01... | 1201 | 26 | 2.1 | .340 | 2.8 | .940 | -- |
| 01... | 1202 | 26 | 2.1 | .350 | 3.7 | .940 | -- |
| 01... | 1630 | 71 | 1.5 | .530 | 4.5 | 1.62 | -- |
| 01... | 1930 | 79 | 1.6 | .360 | 3.0 | 1.13 | -- |
| 02... | 0030 | 55 | 1.9 | .240 | 2.2 | .870 | -- |
| 02... | 0630 | 20 | 2.7 | .170 | 2.0 | .600 | -- |
| 02... | 1400 | 12 | 2.9 | .090 | 1.5 | .340 | -- |
| 18... | 1300 | 14 | 1.8 | .440 | 2.9 | .890 | -- |
| 18... | 1800 | 19 | 1.6 | .420 | 3.2 | 1.00 | -- |
| 18... | 2100 | 33 | 1.3 | .600 | 5.3 | 1.93 | -- |
| 19... | 0200 | 15 | 1.8 | .280 | 2.2 | .650 | -- |
| DEC | | | | | | | |
| 11... | 1100 | 5.7 | 2.1 | .060 | .40 | .070 | .033 |
| JAN , 1986 | | | | | | | |
| 14... | 1045 | 4.7 | 2.2 | .040 | .40 | .070 | .027 |
| FEB | | | | | | | |
| 19... | 1405 | 5.3 | 2.2 | .180 | .90 | .100 | .049 |
| MAR | | | | | | | |
| 10... | 1031 | 11 | 2.5 | 1.10 | 4.2 | 1.02 | -- |
| 10... | 1445 | 20 | 2.4 | 1.50 | 6.6 | 1.67 | -- |
| 10... | 1645 | 22 | 2.6 | 2.00 | 7.0 | 1.57 | -- |
| 10... | 2245 | 15 | 2.6 | 1.70 | 5.0 | 1.03 | -- |
| 16... | 1630 | 17 | 2.1 | 2.00 | 5.9 | 1.46 | -- |
| 17... | 1500 | 15 | 2.1 | 1.20 | 3.5 | .760 | -- |
| 17... | 1800 | 23 | 2.0 | 1.60 | 4.4 | 1.08 | -- |
| 17... | 2200 | 19 | 2.1 | 1.30 | 3.7 | .790 | -- |
| 18... | 0200 | 24 | 2.2 | 1.40 | 4.1 | .890 | -- |
| 19... | 0830 | 31 | 2.1 | .840 | 2.8 | .730 | .400 |
| 20... | 0030 | 9.9 | 4.7 | 1.10 | 3.6 | .820 | -- |
| MAY | | | | | | | |
| 07... | 1410 | 5.9 | 2.0 | .030 | .30 | .060 | .036 |
| 15... | 1915 | 14 | 2.8 | .520 | 5.7 | 1.76 | -- |
| 15... | 2115 | 12 | 2.2 | .450 | 3.9 | 1.08 | -- |
| 17... | 1500 | 11 | 1.8 | .590 | 4.0 | 1.32 | -- |
| 17... | 1800 | 19 | 1.8 | .520 | 4.0 | 1.47 | -- |
| 17... | 2000 | 21 | 1.8 | .470 | 3.7 | 1.31 | -- |
| 17... | 2300 | 16 | 1.9 | .310 | 2.6 | .860 | -- |
| 18... | 0930 | 8.1 | 2.2 | .140 | 1.6 | .370 | -- |

## 05406491 GARFOOT CREEK AT CROSS PLAINS, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | SEDIMENT, SUSPENDED (MG/L) (80154) |
|---|---|---|---|
| OCT , 1985 | | | |
| 04... | 1459 | 4.9 | 32 |
| 11... | 1514 | 5.3 | 18 |
| 12... | 0545 | 15 | 561 |
| 12... | 0745 | 24 | 790 |
| 12... | 0945 | 22 | 583 |
| 12... | 1245 | 16 | 211 |
| 12... | 1445 | 13 | 156 |
| 12... | 1845 | 9.8 | 113 |
| 12... | 2145 | 8.4 | 90 |
| 18... | 0923 | 5.5 | 62 |
| 19... | 0200 | 8.6 | 152 |
| 19... | 0400 | 8.8 | 134 |
| 23... | 1945 | 9.8 | 304 |
| 23... | 2245 | 16 | 379 |
| 24... | 0045 | 15 | 305 |
| 24... | 0345 | 11 | 215 |
| 24... | 0745 | 8.8 | 127 |
| 27... | 0725 | 5.5 | 77 |
| 31... | 1626 | 5.4 | 30 |
| 31... | 2130 | 7.5 | 282 |
| NOV | | | |
| 01... | 0130 | 23 | 521 |
| 01... | 0530 | 33 | 274 |
| 01... | 0950 | 27 | 140 |
| 01... | 1203 | 26 | 143 |
| 01... | 1205 | 26 | 157 |
| 01... | 1349 | 37 | 223 |
| 01... | 1350 | 37 | 204 |
| 01... | 1830 | 79 | 255 |
| 01... | 2230 | 66 | 131 |
| 02... | 0330 | 32 | 112 |
| 02... | 0830 | 17 | 96 |
| 02... | 1800 | 9.8 | 88 |
| 07... | 1413 | 6.7 | 53 |
| 12... | 1015 | 6.4 | 78 |
| 12... | 1815 | 7.5 | 78 |
| 13... | 0415 | 8.1 | 54 |
| 14... | 0758 | 9.0 | 50 |
| 18... | 1315 | 15 | 246 |
| 18... | 1900 | 24 | 355 |
| 18... | 2000 | 32 | 675 |
| 19... | 0100 | 17 | 159 |
| 19... | 0700 | 11 | 112 |
| 22... | 0744 | 6.1 | 113 |
| DEC | | | |
| 06... | 1602 | 5.8 | 95 |
| 11... | 1100 | 5.7 | 64 |
| 13... | 0810 | 5.5 | 284 |
| 22... | 1638 | 5.4 | 79 |
| 29... | 0823 | 5.0 | 94 |
| JAN , 1986 | | | |
| 05... | 1611 | 5.0 | 42 |
| 12... | 0905 | 5.0 | 56 |
| 19... | 1646 | 5.3 | 38 |
| 24... | 0816 | 5.1 | 44 |
| 30... | 1454 | 4.9 | 21 |
| FEB , 1986 | | | |
| 06... | 1233 | 6.4 | 34 |
| 14... | 0755 | 5.1 | 68 |
| 19... | 1405 | 5.3 | 28 |
| 20... | 1010 | 5.5 | 39 |
| 28... | 0748 | 5.3 | 93 |
| MAR | | | |
| 07... | 0752 | 5.8 | 33 |
| 10... | 1031 | 11 | 388 |
| 10... | 1545 | 22 | 894 |
| 10... | 1745 | 20 | 559 |
| 10... | 2045 | 17 | 358 |
| 11... | 0805 | 12 | 150 |
| 13... | 1616 | 9.4 | 109 |
| 16... | 1730 | 19 | 548 |
| 16... | 2030 | 17 | 271 |
| 17... | 1600 | 18 | 301 |
| 17... | 1900 | 23 | 332 |
| 17... | 2300 | 18 | 185 |
| 18... | 0245 | 26 | 345 |
| 18... | 0745 | 27 | 252 |
| 19... | 0830 | 31 | 129 |
| 19... | 0831 | 31 | 156 |
| 19... | 1630 | 19 | 116 |
| 20... | 1644 | 9.0 | 65 |
| 21... | 1100 | 7.7 | 55 |
| 27... | 1502 | 8.3 | 39 |
| APR | | | |
| 02... | 1643 | 7.7 | 33 |
| 11... | 0741 | 7.2 | 16 |
| 14... | 1415 | 18 | 692 |
| 18... | 0834 | 7.4 | 86 |
| 24... | 1040 | 6.7 | 36 |
| MAY | | | |
| 02... | 0746 | 6.2 | 42 |
| 07... | 1410 | 5.9 | 32 |
| 08... | 1846 | 5.8 | 683 |
| 14... | 0755 | 7.4 | 116 |
| 15... | 1815 | 11 | 726 |
| 15... | 2015 | 13 | 487 |
| 16... | 0823 | 7.0 | 161 |
| 17... | 1400 | 9.4 | 367 |
| 17... | 1700 | 16 | 518 |
| 17... | 1900 | 20 | 417 |
| 17... | 2000 | 21 | 391 |
| 17... | 2200 | 18 | 289 |
| 18... | 0930 | 8.1 | 115 |
| 25... | 0732 | 5.8 | 101 |
| 31... | 0803 | 5.7 | 101 |
| JUN | | | |
| 07... | 0803 | 5.4 | 86 |
| 13... | 0743 | 5.3 | 96 |
| 22... | 0817 | 5.9 | 142 |
| 26... | 0753 | 5.0 | 94 |
| JUL | | | |
| 07... | 1905 | 6.7 | 419 |
| 12... | 1012 | 5.7 | 347 |

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI

LOCATION.--Lat 43°08'03", long 89°43'56", in SW 1/4 sec.25, T.8 N., R.6 E., Dane County, Hydrologic Unit 07070005, on right bank, 0.8 mi east of Black Earth and 2.1 mi upstream from Vermont Creek.

DRAINAGE AREA.--45.6 mi$^2$, of which 2.8 mi$^2$ probably is noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1954 to current year.

REVISED RECORDS.--WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 812.95 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records are good.

AVERAGE DISCHARGE.--32 years, 33.3 ft$^3$/s, 10.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft$^3$ July 3, 1954, gage height, 6.58 ft; minimum, 4.8 ft$^3$/s Nov. 29, 1958, gage height, 1.39 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 1 | 2245 | 219 | 3.42 | Mar. 19 | 0515 | *236 | *3.50 |

Minimum daily, 36 ft$^3$/s Sept. 2 and 5.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second. (Shifting-control method used May 6 to Sept. 30; stage-discharge relation affected by ice Dec. 17-19, 25, and Jan. 27-31.)

| | | | |
|---|---|---|---|
| 1.8 | 28 | 3.0 | 167 |
| 2.0 | 47 | 3.5 | 236 |
| 2.5 | 104 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46 | 150 | 55 | 43 | 43 | 42 | 69 | 55 | 46 | 43 | 44 | 37 |
| 2 | 43 | 143 | 52 | 44 | 43 | 42 | 65 | 54 | 45 | 42 | 43 | 36 |
| 3 | 40 | 81 | 53 | 43 | 42 | 43 | 71 | 52 | 45 | 41 | 42 | 37 |
| 4 | 40 | 67 | 52 | 44 | 51 | 44 | 71 | 50 | 45 | 39 | 43 | 38 |
| 5 | 44 | 64 | 51 | 43 | 64 | 47 | 71 | 52 | 46 | 40 | 43 | 36 |
| 6 | 41 | 63 | 50 | 43 | 59 | 47 | 66 | 51 | 45 | 41 | 45 | 37 |
| 7 | 40 | 66 | 50 | 42 | 58 | 44 | 64 | 49 | 46 | 42 | 45 | 40 |
| 8 | 39 | 59 | 50 | 42 | 58 | 43 | 62 | 47 | 48 | 55 | 42 | 41 |
| 9 | 43 | 59 | 50 | 43 | 56 | 44 | 60 | 47 | 47 | 49 | 42 | 44 |
| 10 | 51 | 58 | 51 | 43 | 51 | 88 | 58 | 46 | 51 | 50 | 49 | 68 |
| 11 | 47 | 56 | 51 | 43 | 48 | 95 | 59 | 48 | 51 | 70 | 46 | 104 |
| 12 | 72 | 59 | 49 | 44 | 46 | 80 | 61 | 49 | 51 | 62 | 43 | 70 |
| 13 | 61 | 74 | 48 | 42 | 44 | 78 | 58 | 55 | 47 | 54 | 43 | 56 |
| 14 | 51 | 77 | 47 | 43 | 44 | 85 | 73 | 65 | 48 | 47 | 46 | 53 |
| 15 | 49 | 67 | 46 | 42 | 43 | 85 | 71 | 66 | 48 | 45 | 44 | 53 |
| 16 | 45 | 89 | 46 | 43 | 43 | 95 | 65 | 69 | 47 | 43 | 42 | 51 |
| 17 | 44 | 69 | 45 | 43 | 43 | 108 | 61 | 86 | 44 | 42 | 41 | 49 |
| 18 | 51 | 83 | 45 | 44 | 43 | 172 | 58 | 92 | 43 | 45 | 42 | 51 |
| 19 | 58 | 93 | 45 | 45 | 43 | 190 | 58 | 68 | 43 | 44 | 41 | 51 |
| 20 | 55 | 70 | 44 | 45 | 45 | 104 | 57 | 58 | 41 | 42 | 41 | 52 |
| 21 | 51 | 61 | 44 | 45 | 44 | 85 | 55 | 54 | 41 | 41 | 40 | 63 |
| 22 | 48 | 60 | 44 | 45 | 43 | 84 | 53 | 52 | 54 | 41 | 40 | 64 |
| 23 | 50 | 58 | 46 | 45 | 43 | 85 | 53 | 50 | 47 | 40 | 41 | 60 |
| 24 | 69 | 57 | 45 | 44 | 43 | 78 | 52 | 48 | 43 | 40 | 40 | 60 |
| 25 | 56 | 57 | 45 | 42 | 42 | 78 | 52 | 48 | 42 | 46 | 41 | 102 |
| 26 | 51 | 56 | 45 | 41 | 43 | 74 | 58 | 48 | 43 | 43 | 73 | 74 |
| 27 | 47 | 54 | 43 | 40 | 42 | 69 | 57 | 49 | 48 | 42 | 65 | 65 |
| 28 | 45 | 54 | 43 | 40 | 42 | 71 | 55 | 48 | 43 | 52 | 48 | 59 |
| 29 | 44 | 52 | 43 | 40 | --- | 70 | 53 | 47 | 44 | 44 | 42 | 72 |
| 30 | 43 | 52 | 43 | 40 | --- | 68 | 55 | 48 | 45 | 42 | 40 | 73 |
| 31 | 45 | --- | 43 | 41 | --- | 66 | --- | 47 | --- | 43 | 39 | --- |
| TOTAL | 1509 | 2108 | 1464 | 1327 | 1309 | 2404 | 1821 | 1698 | 1377 | 1410 | 1376 | 1696 |
| MEAN | 48.7 | 70.3 | 47.2 | 42.8 | 46.8 | 77.5 | 60.7 | 54.8 | 45.9 | 45.5 | 44.4 | 56.5 |
| MAX | 72 | 150 | 55 | 45 | 64 | 190 | 73 | 92 | 54 | 70 | 73 | 104 |
| MIN | 39 | 52 | 43 | 40 | 42 | 42 | 52 | 46 | 41 | 39 | 39 | 36 |
| CFSM | 1.07 | 1.54 | 1.04 | .94 | 1.03 | 1.70 | 1.33 | 1.20 | 1.01 | 1.00 | .97 | 1.24 |
| IN. | 1.23 | 1.72 | 1.19 | 1.08 | 1.07 | 1.96 | 1.49 | 1.39 | 1.12 | 1.15 | 1.12 | 1.38 |

CAL YR 1985 TOTAL 18449 MEAN 50.5 MAX 448 MIN 27 CFSM 1.11 IN 15.05
WTR YR 1986 TOTAL 19499 MEAN 53.4 MAX 190 MIN 36 CFSM 1.17 IN 15.91

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986.
TOTAL PHOSPHORUS DISCHARGE: October 1984 to June 1986.
TOTAL NITROGEN DISCHARGE: October 1984 to June 1986.
WATER TEMPERATURE: November 1984 to September 1986.
DOSSOLVED OXYGEN: February 1986 to September 1986

INSTRUMENTATION.--Water-quality sampler since February 1985. Continuous water temperature recorder since November 1984. Water-quality monitor since February 1986.

COOPERATION.--Water-sediment samples were collected by the U.S. Geological Survey; chemical analysis was performed by the Wisconsin State Laboratory of Hygiene; and suspended-sediment concentrations were determined by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 466 tons July 25, 1985; minimum daily, 1.2 ton June 20, 1985.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 3,170 lb July 25, 1985; minimum daily, 7.0 lb Dec. 26, 1985.
TOTAL NITROGEN DISCHARGE: Maximum daily, 9,870 lb July 25, 1985; minimum daily, 363 lb Dec. 26, 1985.
WATER TEMPERATURE: Maximum observed, 24°C July 25, 1985; minimum observed, 0°C on several days during the winter period in 1985.
DISSOLVED OXYGEN: Maximum observed, 18.9 mg/L Feb. 19, 1986; minimum observed, 4.8 mg/L Aug. 26, 1986.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 286 tons Mar. 19; minimum daily, 1.5 ton Feb. 19.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 1,010 lb Mar. 18; minimum daily, 13.0 lb Feb. 28, Mar. 1.
TOTAL NITROGEN DISCHARGE: Maximum daily, 5,500 lb Mar. 18; minimum daily, 476 lb Oct. 8.
WATER TEMPERATURE: Maximum observed, 23°C July 18; minimum observed, 0.5°C on several days during the winter period.
DISSOLVED OXYGEN: Maximum observed, 18.9 mg/L Feb. 19; minimum daily, 4.8 mg/L Aug. 26.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.8 | 116 | 6.2 | 5.4 | 9.2 | 7.3 | 20 | 7.7 | 5.0 | | | |
| 2 | 8.2 | 56 | 5.8 | 4.9 | 8.9 | 6.2 | 18 | 8.6 | 4.6 | | | |
| 3 | 7.6 | 17 | 5.9 | 4.4 | 8.7 | 5.3 | 22 | 7.1 | 4.3 | | | |
| 4 | 7.6 | 11 | 5.7 | 3.9 | 10 | 4.7 | 22 | 5.8 | 4.0 | | | |
| 5 | 7.8 | 8.0 | 5.6 | 3.5 | 13 | 4.2 | 12 | 5.0 | 3.9 | | | |
| 6 | 6.6 | 6.0 | 5.4 | 3.7 | 12 | 3.5 | 8.9 | 4.1 | 3.6 | | | |
| 7 | 5.8 | 4.9 | 5.6 | 4.1 | 11 | 2.9 | 7.0 | 4.0 | 3.5 | | | |
| 8 | 5.3 | 4.4 | 5.7 | 4.7 | 11 | 2.8 | 5.6 | 13 | 3.7 | | | |
| 9 | 5.3 | 4.8 | 6.0 | 5.4 | 11 | 3.0 | 4.5 | 19 | 3.7 | | | |
| 10 | 6.3 | 5.2 | 6.3 | 6.1 | 9.7 | 68 | 3.5 | 17 | 9.2 | | | |
| 11 | 4.9 | 5.4 | 5.2 | 7.0 | 8.9 | 40 | 3.0 | 17 | 9.2 | | | |
| 12 | 35 | 6.1 | 3.6 | 7.8 | 8.5 | 30 | 3.1 | 16 | 4.2 | | | |
| 13 | 8.6 | 15 | 3.2 | 7.2 | 8.2 | 30 | 3.2 | 17 | 4.0 | | | |
| 14 | 4.1 | 17 | 3.2 | 7.0 | 7.6 | 33 | 9.9 | 19 | 4.1 | | | |
| 15 | 3.9 | 8.7 | 3.2 | 6.6 | 5.3 | 33 | 9.3 | 18 | 4.3 | | | |
| 16 | 3.6 | 35 | 3.2 | 6.3 | 3.8 | 40 | 11 | 20 | 4.2 | | | |
| 17 | 3.5 | 12 | 3.4 | 6.1 | 2.7 | 58 | 15 | 36 | 4.1 | | | |
| 18 | 6.2 | 25 | 3.7 | 6.0 | 1.9 | 253 | 19 | 43 | 4.1 | | | |
| 19 | 8.5 | 32 | 3.4 | 5.8 | 1.5 | 286 | 15 | 19 | 4.2 | | | |
| 20 | 3.9 | 11 | 3.4 | 5.3 | 2.7 | 70 | 12 | 13 | 4.1 | | | |
| 21 | 3.5 | 8.3 | 3.4 | 4.8 | 3.2 | 13 | 8.8 | 12 | 4.2 | | | |
| 22 | 3.1 | 7.3 | 3.5 | 4.3 | 3.7 | 30 | 6.6 | 12 | 11 | | | |
| 23 | 3.1 | 7.0 | 3.9 | 3.8 | 4.3 | 31 | 5.1 | 11 | 4.5 | | | |
| 24 | 13 | 6.7 | 4.4 | 3.6 | 5.0 | 15 | 3.9 | 11 | 3.8 | | | |
| 25 | 3.2 | 6.7 | 5.1 | 4.0 | 5.9 | 18 | 3.0 | 10 | 3.3 | | | |
| 26 | 2.8 | 6.6 | 5.7 | 4.6 | 7.0 | 20 | 2.8 | 9.5 | 3.1 | | | |
| 27 | 2.4 | 6.3 | 6.2 | 11 | 8.0 | 21 | 3.3 | 8.6 | 7.9 | | | |
| 28 | 2.2 | 6.3 | 6.9 | 7.8 | 8.6 | 22 | 4.0 | 7.6 | 3.1 | | | |
| 29 | 2.1 | 6.0 | 7.5 | 8.0 | --- | 21 | 4.8 | 6.7 | 3.2 | | | |
| 30 | 2.0 | 5.9 | 6.8 | 9.0 | --- | 20 | 6.2 | 6.1 | 3.3 | | | |
| 31 | 3.3 | --- | 6.1 | 9.1 | --- | 19 | --- | 5.4 | --- | | | |
| TOTAL | 192.2 | 467.6 | 153.2 | 181.2 | 201.3 | 1210.9 | 272.5 | 409.2 | 139.4 | | | |

WTR YR 1986 TOTAL 3227.5

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23.0 | 914 | 25.0 | 17.0 | 15.0 | 13.0 | 72.0 | 24.0 | 20.0 | | | |
| 2 | 21.0 | 522 | 24.0 | 17.0 | 15.0 | 14.0 | 60.0 | 24.0 | 19.0 | | | |
| 3 | 20.0 | 146 | 24.0 | 17.0 | 15.0 | 14.0 | 79.0 | 23.0 | 19.0 | | | |
| 4 | 20.0 | 45.0 | 23.0 | 17.0 | 28.0 | 14.0 | 79.0 | 22.0 | 19.0 | | | |
| 5 | 22.0 | 31.0 | 23.0 | 17.0 | 57.0 | 15.0 | 79.0 | 22.0 | 20.0 | | | |
| 6 | 20.0 | 31.0 | 22.0 | 17.0 | 20.0 | 15.0 | 31.0 | 22.0 | 19.0 | | | |
| 7 | 19.0 | 32.0 | 22.0 | 16.0 | 20.0 | 14.0 | 30.0 | 21.0 | 20.0 | | | |
| 8 | 19.0 | 28.0 | 22.0 | 16.0 | 20.0 | 14.0 | 29.0 | 20.0 | 21.0 | | | |
| 9 | 21.0 | 29.0 | 22.0 | 16.0 | 19.0 | 15.0 | 28.0 | 20.0 | 20.0 | | | |
| 10 | 36.0 | 28.0 | 22.0 | 16.0 | 17.0 | 371 | 27.0 | 20.0 | 28.0 | | | |
| 11 | 23.0 | 27.0 | 22.0 | 17.0 | 16.0 | 174 | 27.0 | 21.0 | 22.0 | | | |
| 12 | 92.0 | 28.0 | 21.0 | 17.0 | 15.0 | 108 | 28.0 | 21.0 | 22.0 | | | |
| 13 | 58.0 | 99.0 | 20.0 | 16.0 | 15.0 | 105 | 27.0 | 36.0 | 20.0 | | | |
| 14 | 25.0 | 110 | 20.0 | 16.0 | 15.0 | 114 | 86.0 | 60.0 | 21.0 | | | |
| 15 | 24.0 | 33.0 | 20.0 | 16.0 | 14.0 | 115 | 79.0 | 63.0 | 21.0 | | | |
| 16 | 22.0 | 164 | 19.0 | 16.0 | 14.0 | 293 | 30.0 | 72.0 | 20.0 | | | |
| 17 | 21.0 | 34.0 | 20.0 | 16.0 | 14.0 | 446 | 28.0 | 144 | 19.0 | | | |
| 18 | 25.0 | 173 | 21.0 | 16.0 | 14.0 | 1010 | 27.0 | 177 | 19.0 | | | |
| 19 | 51.0 | 175 | 19.0 | 17.0 | 14.0 | 1000 | 26.0 | 29.0 | 18.0 | | | |
| 20 | 27.0 | 68.0 | 18.0 | 17.0 | 15.0 | 255 | 26.0 | 25.0 | 18.0 | | | |
| 21 | 25.0 | 30.0 | 18.0 | 17.0 | 14.0 | 111 | 25.0 | 23.0 | 18.0 | | | |
| 22 | 23.0 | 29.0 | 18.0 | 17.0 | 14.0 | 47.0 | 24.0 | 23.0 | 34.0 | | | |
| 23 | 24.0 | 28.0 | 19.0 | 16.0 | 14.0 | 41.0 | 24.0 | 21.0 | 20.0 | | | |
| 24 | 82.0 | 27.0 | 18.0 | 16.0 | 14.0 | 38.0 | 23.0 | 21.0 | 19.0 | | | |
| 25 | 27.0 | 27.0 | 19.0 | 15.0 | 14.0 | 37.0 | 23.0 | 21.0 | 18.0 | | | |
| 26 | 25.0 | 26.0 | 18.0 | 15.0 | 14.0 | 36.0 | 42.0 | 21.0 | 18.0 | | | |
| 27 | 23.0 | 25.0 | 18.0 | 15.0 | 14.0 | 33.0 | 25.0 | 21.0 | 23.0 | | | |
| 28 | 22.0 | 25.0 | 17.0 | 15.0 | 13.0 | 34.0 | 24.0 | 21.0 | 19.0 | | | |
| 29 | 21.0 | 24.0 | 17.0 | 15.0 | --- | 33.0 | 23.0 | 20.0 | 19.0 | | | |
| 30 | 21.0 | 24.0 | 17.0 | 15.0 | --- | 32.0 | 24.0 | 21.0 | 19.0 | | | |
| 31 | 39.0 | --- | 17.0 | 15.0 | --- | 31.0 | --- | 20.0 | --- | | | |
| TOTAL | 921.0 | 2982.0 | 625.0 | 501.0 | 483.0 | 4592.0 | 1155.0 | 1099.0 | 612.0 | | | |

WTR YR 1986 TOTAL 12970.0

### NITROGEN, TOTAL, LOAD POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 575 | 4980 | 788 | 624 | 620 | 571 | 1260 | 669 | 597 | | | |
| 2 | 536 | 3070 | 729 | 635 | 611 | 574 | 843 | 653 | 584 | | | |
| 3 | 499 | 1350 | 749 | 632 | 605 | 583 | 920 | 623 | 583 | | | |
| 4 | 497 | 897 | 733 | 640 | 724 | 604 | 1320 | 603 | 587 | | | |
| 5 | 545 | 854 | 733 | 631 | 1120 | 637 | 1320 | 616 | 607 | | | |
| 6 | 502 | 834 | 715 | 628 | 842 | 639 | 857 | 606 | 594 | | | |
| 7 | 484 | 1050 | 719 | 613 | 820 | 602 | 823 | 582 | 606 | | | |
| 8 | 476 | 758 | 718 | 616 | 824 | 586 | 794 | 557 | 633 | | | |
| 9 | 521 | 754 | 726 | 624 | 791 | 619 | 775 | 560 | 628 | | | |
| 10 | 699 | 739 | 743 | 620 | 728 | 2620 | 742 | 557 | 685 | | | |
| 11 | 565 | 709 | 742 | 632 | 674 | 2350 | 747 | 581 | 685 | | | |
| 12 | 1210 | 732 | 718 | 640 | 647 | 1550 | 774 | 597 | 685 | | | |
| 13 | 928 | 913 | 696 | 614 | 626 | 1050 | 741 | 663 | 639 | | | |
| 14 | 609 | 1340 | 683 | 623 | 625 | 1740 | 1370 | 1150 | 651 | | | |
| 15 | 580 | 813 | 671 | 615 | 609 | 1740 | 894 | 1170 | 661 | | | |
| 16 | 536 | 1690 | 667 | 619 | 606 | 2000 | 816 | 1260 | 640 | | | |
| 17 | 522 | 831 | 682 | 627 | 605 | 2830 | 762 | 1770 | 601 | | | |
| 18 | 699 | 1600 | 732 | 643 | 605 | 5500 | 732 | 1970 | 595 | | | |
| 19 | 857 | 1910 | 665 | 653 | 608 | 5450 | 726 | 1230 | 590 | | | |
| 20 | 642 | 1080 | 647 | 652 | 628 | 2190 | 714 | 722 | 563 | | | |
| 21 | 597 | 829 | 639 | 658 | 609 | 1220 | 679 | 669 | 573 | | | |
| 22 | 554 | 812 | 645 | 655 | 600 | 1130 | 654 | 653 | 857 | | | |
| 23 | 584 | 794 | 664 | 646 | 596 | 1740 | 654 | 623 | 659 | | | |
| 24 | 1130 | 775 | 656 | 640 | 591 | 1040 | 641 | 611 | 611 | | | |
| 25 | 646 | 778 | 664 | 606 | 587 | 1040 | 635 | 601 | 593 | | | |
| 26 | 583 | 773 | 660 | 591 | 595 | 991 | 958 | 611 | 592 | | | |
| 27 | 537 | 751 | 633 | 583 | 582 | 921 | 932 | 620 | 712 | | | |
| 28 | 513 | 749 | 623 | 583 | 572 | 935 | 674 | 612 | 589 | | | |
| 29 | 504 | 731 | 627 | 583 | --- | 921 | 646 | 605 | 603 | | | |
| 30 | 495 | 727 | 636 | 583 | --- | 897 | 666 | 621 | 606 | | | |
| 31 | 556 | --- | 630 | 591 | --- | 862 | --- | 608 | --- | | | |
| TOTAL | 19181 | 34623 | 21333 | 19300 | 18650 | 46132 | 25069 | 23973 | 18809 | | | |

WTR YR 1986 TOTAL 227070

05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | 11.0 | 9.5 | 10.0 | 10.5 | 9.0 | 10.0 | 5.0 | 2.0 | 3.0 | 4.0 | 2.0 | 3.0 |
| 2 | 12.5 | 8.5 | 10.5 | 9.5 | 8.5 | 9.0 | 2.0 | .5 | 1.0 | 4.0 | 2.5 | 3.5 |
| 3 | 13.0 | 10.0 | 11.5 | 8.5 | 8.0 | 8.5 | 3.0 | .5 | 2.0 | 5.0 | 3.0 | 4.0 |
| 4 | 12.5 | 10.5 | 11.5 | 9.5 | 8.0 | 8.5 | 5.0 | 3.0 | 4.0 | 4.5 | 3.0 | 4.0 |
| 5 | 11.0 | 9.5 | 10.0 | 8.5 | 6.0 | 7.5 | 5.0 | 3.5 | 4.5 | 3.0 | 1.5 | 2.0 |
| 6 | 11.5 | 8.5 | 10.0 | 8.5 | 8.5 | 8.5 | 4.0 | 2.0 | 3.0 | 2.0 | .5 | 1.5 |
| 7 | 12.0 | 9.0 | 10.5 | 9.0 | 6.0 | 8.0 | 5.5 | 3.5 | 4.5 | .5 | .5 | .5 |
| 8 | 13.0 | 11.0 | 12.0 | 8.5 | 6.5 | 7.5 | 5.0 | 3.5 | 4.0 | 1.0 | .5 | .5 |
| 9 | 12.5 | 9.5 | 10.5 | 6.5 | 4.5 | 5.5 | 6.0 | 4.5 | 5.0 | 4.0 | 1.0 | 2.5 |
| 10 | 11.0 | 9.0 | 9.5 | 6.0 | 5.0 | 5.5 | 6.0 | 5.0 | 5.5 | 5.0 | 3.5 | 4.5 |
| 11 | 11.0 | 8.5 | 9.5 | 6.5 | 5.0 | 5.5 | 5.5 | 3.5 | 4.5 | 6.0 | 4.0 | 5.0 |
| 12 | 12.5 | 9.5 | 11.5 | 8.5 | 6.0 | 7.0 | 3.5 | 1.5 | 2.0 | 4.5 | 2.0 | 3.5 |
| 13 | 14.0 | 11.0 | 12.5 | 7.5 | 5.5 | 7.0 | 1.5 | .5 | 1.0 | 3.0 | 1.0 | 2.0 |
| 14 | 12.0 | 10.5 | 11.5 | 7.5 | 5.5 | 6.5 | 2.0 | .5 | 1.0 | 4.5 | 3.0 | 3.5 |
| 15 | 12.5 | 10.0 | 11.0 | 7.5 | 5.5 | 6.5 | 3.5 | 2.0 | 2.5 | 4.0 | 1.5 | 3.0 |
| 16 | 11.5 | 8.5 | 10.0 | 8.5 | 5.5 | 7.0 | 3.0 | 1.5 | 2.5 | 5.5 | 2.5 | 4.5 |
| 17 | 11.5 | 9.5 | 10.5 | 8.5 | 5.5 | 7.5 | 1.5 | .5 | 1.0 | 6.5 | 4.5 | 5.5 |
| 18 | 12.0 | 11.5 | 11.5 | 10.5 | 8.5 | 9.5 | .5 | .5 | .5 | 6.5 | 5.5 | 6.0 |
| 19 | 11.5 | 9.5 | 11.0 | 10.0 | 6.5 | 9.0 | 1.0 | .5 | .5 | 6.5 | 5.0 | 5.5 |
| 20 | 11.5 | 9.5 | 11.0 | 6.0 | 3.5 | 4.5 | 1.5 | .5 | 1.0 | 6.0 | 5.0 | 5.5 |
| 21 | 11.5 | 9.5 | 11.0 | 5.5 | 3.5 | 4.5 | 2.5 | .5 | 1.5 | 6.5 | 5.0 | 5.5 |
| 22 | 12.5 | 9.5 | 11.5 | 6.0 | 5.0 | 5.5 | 5.0 | 2.5 | 4.0 | 5.5 | 4.0 | 4.5 |
| 23 | 12.5 | 12.0 | 12.0 | 5.5 | 4.0 | 5.0 | 5.0 | 3.5 | 4.5 | 5.0 | 2.5 | 4.0 |
| 24 | 13.0 | 11.0 | 12.0 | 4.5 | 3.0 | 4.0 | 3.5 | .5 | 1.5 | 5.0 | 4.0 | 4.0 |
| 25 | 11.5 | 8.5 | 10.0 | 5.5 | 4.0 | 4.5 | .5 | .5 | .5 | 4.5 | 3.0 | 4.0 |
| 26 | 12.5 | 9.5 | 11.0 | 6.5 | 5.5 | 6.0 | 2.5 | .5 | 1.0 | 3.0 | .5 | 1.5 |
| 27 | 12.0 | 9.0 | 10.5 | 5.0 | 4.0 | 4.5 | 2.0 | .5 | 1.5 | .5 | .5 | .5 |
| 28 | 10.5 | 8.0 | 9.5 | 5.5 | 4.0 | 5.0 | 2.5 | .5 | 1.0 | 3.0 | .5 | 1.0 |
| 29 | 10.5 | 8.5 | 9.5 | 4.0 | 3.0 | 3.5 | 2.5 | 1.0 | 2.0 | 3.0 | 1.5 | 2.5 |
| 30 | 11.0 | 8.0 | 9.5 | 5.5 | 3.5 | 4.5 | 4.0 | 1.0 | 2.5 | 3.5 | 1.0 | 2.5 |
| 31 | 10.0 | 8.5 | 9.5 | --- | --- | --- | 4.0 | 2.5 | 3.0 | 4.5 | 3.5 | 4.0 |
| MONTH | 14.0 | 8.0 | 10.5 | 10.5 | 3.0 | 6.5 | 6.0 | .5 | 2.5 | 6.5 | .5 | 3.5 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | 5.5 | 3.5 | 4.5 | 7.5 | 3.0 | 5.0 | 14.0 | 10.0 | 12.0 | 13.0 | 10.0 | 12.0 |
| 2 | 6.5 | 5.0 | 5.5 | 9.0 | 5.0 | 6.5 | 13.0 | 7.5 | 10.5 | 14.0 | 9.0 | 11.5 |
| 3 | 6.0 | 5.5 | 5.5 | 8.5 | 4.5 | 7.0 | 9.5 | 8.5 | 8.5 | 15.0 | 9.0 | 12.0 |
| 4 | 5.5 | 4.5 | 5.0 | 8.5 | 6.0 | 7.0 | 11.0 | 8.0 | 9.0 | 17.0 | 9.5 | 14.0 |
| 5 | 4.5 | 3.5 | 4.0 | 6.5 | 4.5 | 5.5 | 13.5 | 9.0 | 11.0 | 16.0 | 12.5 | 14.0 |
| 6 | 4.5 | 3.5 | 4.0 | 6.0 | 2.5 | 4.0 | 10.5 | 9.0 | 10.0 | 19.5 | 13.5 | 16.0 |
| 7 | 5.5 | 3.0 | 4.5 | 4.5 | .5 | 2.5 | 14.5 | 8.5 | 13.0 | 16.0 | 12.0 | 14.0 |
| 8 | 6.0 | 4.0 | 4.5 | 5.0 | 2.0 | 3.5 | 10.5 | 8.5 | 9.5 | 17.0 | 11.5 | 14.0 |
| 9 | 3.5 | 1.5 | 2.5 | 8.5 | 4.5 | 6.0 | 12.5 | 4.5 | 9.5 | 17.0 | 11.5 | 14.5 |
| 10 | 3.5 | .5 | 2.0 | 8.5 | 2.5 | 4.5 | 13.0 | 7.0 | 10.0 | 16.5 | 12.0 | 14.5 |
| 11 | 3.5 | .5 | 2.0 | 6.5 | 2.5 | 4.5 | 13.5 | 7.5 | 11.0 | 14.5 | 12.5 | 13.5 |
| 12 | 3.0 | .5 | 1.5 | 5.5 | 4.0 | 4.5 | 9.5 | 8.5 | 9.0 | 15.0 | 12.5 | 13.5 |
| 13 | 2.5 | .5 | 1.5 | 6.5 | 5.0 | 5.5 | 11.5 | 7.5 | 9.5 | 14.0 | 12.0 | 13.0 |
| 14 | 5.0 | 2.5 | 3.0 | 6.0 | 5.0 | 5.5 | 9.5 | 4.5 | 8.0 | 14.5 | 12.0 | 13.5 |
| 15 | 3.5 | .5 | 2.0 | 6.5 | 5.0 | 5.5 | 9.5 | 6.0 | 8.0 | 14.0 | 12.5 | 13.0 |
| 16 | 4.5 | 3.0 | 3.5 | 8.5 | 5.0 | 6.0 | 12.0 | 7.5 | 10.0 | 16.0 | 13.0 | 14.5 |
| 17 | 6.0 | 4.0 | 5.0 | 7.5 | 4.5 | 6.0 | 13.5 | 8.0 | 11.0 | 15.0 | 13.0 | 13.5 |
| 18 | 6.5 | 5.5 | 6.0 | 5.0 | 4.0 | 4.5 | 12.5 | 9.0 | 11.0 | 15.5 | 11.5 | 13.5 |
| 19 | 7.0 | 6.0 | 6.5 | 5.5 | 3.0 | 4.0 | 13.0 | 9.5 | 11.5 | 13.5 | 11.5 | 12.5 |
| 20 | 6.5 | 3.5 | 5.0 | 6.5 | 2.0 | 4.0 | 13.0 | 9.0 | 11.0 | 15.5 | 9.5 | 12.5 |
| 21 | 5.5 | 2.0 | 3.5 | 8.5 | 3.5 | 6.0 | 10.0 | 7.5 | 9.0 | 16.0 | 9.5 | 13.5 |
| 22 | 5.0 | 3.0 | 4.0 | 9.0 | 4.5 | 7.0 | 12.5 | 5.5 | 9.0 | 13.5 | 11.5 | 12.0 |
| 23 | 5.5 | 2.5 | 4.0 | 10.0 | 5.5 | 8.0 | 13.5 | 7.5 | 10.0 | 14.5 | 9.5 | 12.5 |
| 24 | 6.5 | 3.0 | 5.0 | 8.5 | 5.0 | 7.0 | 15.5 | 8.0 | 12.0 | 14.0 | 11.5 | 13.0 |
| 25 | 6.0 | 3.0 | 5.0 | 12.5 | 5.0 | 10.0 | 16.0 | 10.5 | 13.5 | 16.5 | 11.5 | 14.0 |
| 26 | 6.5 | 4.5 | 5.5 | 12.0 | 8.0 | 10.0 | 17.5 | 12.5 | 14.5 | 15.0 | 13.0 | 14.0 |
| 27 | 6.5 | 3.5 | 5.0 | 11.0 | 6.0 | 8.5 | 18.5 | 13.0 | 15.0 | 14.5 | 13.0 | 13.5 |
| 28 | 5.0 | 1.0 | 3.5 | 14.0 | 7.5 | 11.0 | 15.5 | 10.5 | 12.5 | 16.0 | 13.0 | 14.5 |
| 29 | --- | --- | --- | 15.5 | 10.0 | 12.5 | 14.5 | 8.0 | 12.0 | 17.0 | 13.0 | 15.0 |
| 30 | --- | --- | --- | 14.0 | 10.0 | 12.5 | 14.5 | 11.0 | 13.0 | 19.0 | 13.5 | 16.5 |
| 31 | --- | --- | --- | 15.5 | 9.5 | 12.0 | --- | --- | --- | 19.5 | 14.5 | 17.5 |
| MONTH | 7.0 | .5 | 4.0 | 15.5 | .5 | 6.5 | 18.5 | 4.5 | 11.0 | 19.5 | 9.0 | 13.5 |

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 17.5 | 14.5 | 16.5 | 15.0 | 13.5 | 14.5 | 19.5 | 15.5 | 17.0 | 17.0 | 13.0 | 15.0 |
| 2 | 16.5 | 12.0 | 14.5 | 17.5 | 13.5 | 15.5 | 19.5 | 15.5 | 17.0 | 17.5 | 13.5 | 15.5 |
| 3 | 17.0 | 12.0 | 14.5 | 19.5 | 13.5 | 16.5 | 19.5 | 14.0 | 16.5 | 15.5 | 14.0 | 15.0 |
| 4 | 18.5 | 13.5 | 16.0 | 20.5 | 16.0 | 18.0 | 19.5 | 14.5 | 16.5 | 19.0 | 13.5 | 15.5 |
| 5 | 16.5 | 13.5 | 14.5 | 22.5 | 18.5 | 20.5 | 16.5 | 14.5 | 16.0 | 15.5 | 12.5 | 14.0 |
| 6 | 14.5 | 13.5 | 14.0 | 21.0 | 18.5 | 20.0 | 15.5 | 14.5 | 15.0 | 14.5 | 12.0 | 13.0 |
| 7 | 17.0 | 13.5 | 15.0 | 19.5 | 16.0 | 17.0 | 17.5 | 13.5 | 15.5 | 14.5 | 10.0 | 12.0 |
| 8 | 19.0 | 13.5 | 16.5 | 19.0 | 15.0 | 16.5 | 19.5 | 14.5 | 17.0 | 15.5 | 10.0 | 12.5 |
| 9 | 19.0 | 13.5 | 16.5 | 19.5 | 16.5 | 18.0 | 17.5 | 14.5 | 16.0 | 12.5 | 11.5 | 12.0 |
| 10 | 16.5 | 14.5 | 16.0 | 19.5 | 15.0 | 16.0 | 19.0 | 15.5 | 16.5 | 15.5 | 12.5 | 14.0 |
| 11 | 19.5 | 15.5 | 16.5 | 18.5 | 15.0 | 16.5 | 19.0 | 14.0 | 16.0 | 16.5 | 15.5 | 16.0 |
| 12 | 16.5 | 14.0 | 15.0 | 19.5 | 16.0 | 17.5 | 19.0 | 13.5 | 15.5 | 16.5 | 13.5 | 15.0 |
| 13 | 17.0 | 13.5 | 15.0 | 19.5 | 16.5 | 18.0 | 15.5 | 14.0 | 14.5 | 15.0 | 12.5 | 13.5 |
| 14 | 15.0 | 13.5 | 14.0 | 19.5 | 16.0 | 17.5 | 18.0 | 14.0 | 15.5 | 13.5 | 12.5 | 12.5 |
| 15 | 15.0 | 13.0 | 14.0 | 19.0 | 16.0 | 17.5 | 20.0 | 15.5 | 17.5 | 12.5 | 11.5 | 12.5 |
| 16 | 19.5 | 14.0 | 16.5 | 20.5 | 16.5 | 18.5 | 20.0 | 15.5 | 17.5 | 14.5 | 10.5 | 12.0 |
| 17 | 18.5 | 14.0 | 16.0 | 22.0 | 16.5 | 20.0 | 19.5 | 16.0 | 17.5 | 12.0 | 10.5 | 11.5 |
| 18 | 19.5 | 14.5 | 16.5 | 23.0 | 19.0 | 20.5 | 19.5 | 15.0 | 16.5 | 14.5 | 12.0 | 13.0 |
| 19 | 20.0 | 16.0 | 18.0 | 21.5 | 19.0 | 20.0 | 19.5 | 15.0 | 16.5 | 14.0 | 13.0 | 13.5 |
| 20 | 20.0 | 15.5 | 18.0 | 20.5 | 16.0 | 19.5 | 18.0 | 14.0 | 16.0 | 13.5 | 13.0 | 13.0 |
| 21 | 20.5 | 15.0 | 18.0 | 19.5 | 16.5 | 18.5 | 19.0 | 15.0 | 17.0 | 14.5 | 13.0 | 13.5 |
| 22 | 19.5 | 16.5 | 18.0 | 20.0 | 16.0 | 18.0 | 18.0 | 14.5 | 15.5 | 16.0 | 14.0 | 14.5 |
| 23 | 19.5 | 15.5 | 17.5 | 20.5 | 16.0 | 18.5 | 19.5 | 15.0 | 16.5 | 16.0 | 14.0 | 15.0 |
| 24 | 18.5 | 14.5 | 16.0 | 22.0 | 16.0 | 20.0 | 17.0 | 13.5 | 15.0 | 15.5 | 13.0 | 14.5 |
| 25 | 18.5 | 13.5 | 15.5 | 21.0 | 15.5 | 19.5 | 19.0 | 14.0 | 16.5 | 18.5 | 15.0 | 17.0 |
| 26 | 19.5 | 15.0 | 17.5 | 19.5 | 16.0 | 18.5 | 18.5 | 16.0 | 16.5 | 19.0 | 16.0 | 17.0 |
| 27 | 19.5 | 16.5 | 18.5 | 19.5 | 16.5 | 18.5 | 17.0 | 13.5 | 15.5 | 19.0 | 16.0 | 17.5 |
| 28 | 19.0 | 15.5 | 17.0 | 19.5 | 16.0 | 18.0 | 15.0 | 11.5 | 13.5 | 16.5 | 14.5 | 15.5 |
| 29 | 19.0 | 14.5 | 16.5 | 20.0 | 16.0 | 18.0 | 15.5 | 12.0 | 13.5 | 15.5 | 14.5 | 15.5 |
| 30 | 17.0 | 14.0 | 15.0 | 19.5 | 16.0 | 17.0 | 15.0 | 13.0 | 13.5 | 15.0 | 13.0 | 14.0 |
| 31 | --- | --- | --- | 19.5 | 15.5 | 17.5 | 17.0 | 12.5 | 15.0 | --- | --- | --- |
| MONTH | 20.5 | 12.0 | 16.0 | 23.0 | 13.5 | 18.0 | 20.0 | 11.5 | 16.0 | 19.0 | 10.0 | 14.0 |
| YEAR | 23.0 | .5 | 10.0 | | | | | | | | | |

### OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | | | | | | | | --- | --- | 16.2 | 10.2 |
| 2 | | | | | | | | | --- | --- | 15.8 | 9.8 |
| 3 | | | | | | | | | --- | --- | 15.9 | 9.7 |
| 4 | | | | | | | | | --- | --- | 15.5 | 9.5 |
| 5 | | | | | | | | | --- | --- | 14.0 | 9.6 |
| 6 | | | | | | | | | --- | --- | 16.0 | 10.4 |
| 7 | | | | | | | | | --- | --- | 16.5 | 11.6 |
| 8 | | | | | | | | | --- | --- | 16.6 | 10.9 |
| 9 | | | | | | | | | --- | --- | 14.1 | 9.6 |
| 10 | | | | | | | | | --- | --- | 10.8 | 9.1 |
| 11 | | | | | | | | | --- | --- | 11.7 | 9.9 |
| 12 | | | | | | | | | --- | --- | 12.3 | 10.0 |
| 13 | | | | | | | | | --- | --- | 13.6 | 9.6 |
| 14 | | | | | | | | | 15.8 | 13.4 | 12.0 | 9.6 |
| 15 | | | | | | | | | 17.8 | 13.4 | 12.6 | 9.7 |
| 16 | | | | | | | | | 18.6 | 13.8 | 13.4 | 9.4 |
| 17 | | | | | | | | | 17.4 | 10.9 | 12.3 | 9.7 |
| 18 | | | | | | | | | 15.5 | 10.6 | 10.4 | 9.6 |
| 19 | | | | | | | | | 18.9 | 11.6 | 10.3 | 9.2 |
| 20 | | | | | | | | | --- | --- | 12.1 | 9.7 |
| 21 | | | | | | | | | 16.4 | 11.4 | 13.0 | 9.8 |
| 22 | | | | | | | | | 15.5 | 11.4 | 13.2 | 9.5 |
| 23 | | | | | | | | | 16.2 | 11.0 | 13.5 | 9.7 |
| 24 | | | | | | | | | 16.1 | 10.5 | 14.3 | 9.5 |
| 25 | | | | | | | | | 16.2 | 10.5 | 14.1 | 8.0 |
| 26 | | | | | | | | | 15.0 | 10.4 | 13.6 | 8.1 |
| 27 | | | | | | | | | 16.2 | 10.4 | 14.8 | 8.5 |
| 28 | | | | | | | | | 16.1 | 10.1 | 12.9 | 7.2 |
| 29 | | | | | | | | | --- | --- | 12.9 | 7.1 |
| 30 | | | | | | | | | --- | --- | 12.8 | 7.1 |
| 31 | | | | | | | | | --- | --- | 12.7 | 7.6 |
| MONTH | | | | | | | | | 18.9 | 10.1 | 16.6 | 7.1 |

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

### OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 12.2 | 7.5 | 15.1 | 8.0 | 12.5 | 7.4 | 12.3 | 7.5 | 11.7 | 6.5 | 10.6 | 6.1 |
| 2 | 13.5 | 8.3 | 16.2 | 8.4 | 13.8 | 6.7 | 13.7 | 7.5 | 10.9 | 6.2 | 10.8 | 5.6 |
| 3 | 10.5 | 8.8 | 16.5 | 7.8 | 13.8 | 7.4 | 13.8 | 6.8 | 12.0 | 6.7 | --- | --- |
| 4 | 10.6 | 9.1 | 16.2 | 6.8 | 13.3 | 6.6 | 13.0 | 6.6 | 12.5 | 6.2 | --- | --- |
| 5 | 10.5 | 7.3 | 15.0 | 6.8 | 13.8 | 6.7 | 13.3 | 5.5 | 10.4 | 6.8 | --- | --- |
| 6 | 10.4 | 7.3 | 16.1 | 7.0 | 11.9 | 7.8 | 12.5 | 5.2 | 8.9 | 7.5 | --- | --- |
| 7 | 12.0 | 7.6 | 16.2 | 7.1 | 13.2 | 7.3 | 11.2 | 6.1 | 10.1 | 7.6 | --- | --- |
| 8 | 11.4 | 7.5 | 16.3 | 7.5 | 14.3 | 6.8 | 11.0 | 7.1 | 10.5 | 7.5 | --- | --- |
| 9 | 12.9 | 8.6 | 16.4 | 7.5 | 14.2 | 6.9 | 12.7 | 6.7 | 10.5 | 6.4 | --- | --- |
| 10 | 13.2 | 8.5 | 15.8 | 7.3 | 11.7 | 6.7 | 10.3 | 6.6 | 8.6 | 6.1 | --- | --- |
| 11 | 13.1 | 8.5 | 12.7 | 7.1 | 12.0 | 6.0 | 9.6 | 6.5 | 10.2 | 6.1 | --- | --- |
| 12 | 11.5 | 8.2 | 13.9 | 7.4 | 12.8 | 6.8 | 11.6 | 6.6 | 10.8 | 6.6 | --- | --- |
| 13 | 13.4 | 8.7 | 13.4 | 6.8 | 14.1 | 7.6 | 12.6 | 6.4 | 9.0 | 6.9 | --- | --- |
| 14 | 10.2 | 8.7 | 11.5 | 6.6 | 12.7 | 7.5 | 12.5 | 6.7 | 8.8 | 6.1 | --- | --- |
| 15 | 13.4 | 9.4 | 10.7 | 7.1 | 12.5 | 7.8 | 12.0 | 6.1 | 9.2 | 5.5 | --- | --- |
| 16 | 14.2 | 9.0 | 12.1 | 7.0 | 13.5 | 6.6 | 12.6 | 6.1 | 9.7 | 6.3 | --- | --- |
| 17 | 14.8 | 8.6 | 8.1 | 7.1 | 14.2 | 6.6 | 12.2 | 5.3 | 9.6 | 5.9 | --- | --- |
| 18 | 14.3 | 8.5 | 10.7 | 7.2 | 13.6 | 6.6 | 11.8 | 5.1 | 10.3 | 6.5 | --- | --- |
| 19 | 14.0 | 8.1 | 11.8 | 7.5 | 13.1 | 6.2 | 11.0 | 4.8 | 10.2 | 6.6 | --- | --- |
| 20 | 14.2 | 8.6 | 13.7 | 8.1 | 13.3 | 5.8 | 12.1 | 5.2 | 9.3 | 6.0 | --- | --- |
| 21 | 15.1 | 8.5 | 13.9 | 7.9 | 12.6 | 5.4 | 11.7 | 5.8 | 8.1 | 5.5 | --- | --- |
| 22 | 15.7 | 8.9 | 12.3 | 8.0 | 10.4 | 5.2 | 12.7 | 6.1 | 8.4 | 5.0 | --- | --- |
| 23 | 15.9 | 8.4 | 13.8 | 8.2 | 11.9 | 6.1 | 12.8 | 6.1 | --- | --- | --- | --- |
| 24 | 16.1 | 7.6 | 12.9 | 8.2 | 12.9 | 5.8 | 12.8 | 5.6 | --- | --- | --- | --- |
| 25 | 16.3 | 7.5 | 14.0 | 7.8 | 13.9 | 7.0 | 10.8 | 5.2 | --- | --- | --- | --- |
| 26 | 13.5 | 7.3 | 12.8 | 7.6 | 13.7 | 6.0 | 11.6 | 5.6 | 8.5 | 4.8 | --- | --- |
| 27 | 15.9 | 7.0 | 11.8 | 7.6 | 10.8 | 5.6 | 11.7 | 5.6 | 8.3 | 5.3 | --- | --- |
| 28 | 13.8 | 6.9 | 13.2 | 8.2 | 12.9 | 6.2 | 9.8 | 5.3 | 10.4 | 7.6 | --- | --- |
| 29 | 16.3 | 7.4 | 13.8 | 8.0 | 14.5 | 6.8 | 11.5 | 6.0 | 10.0 | 6.1 | --- | --- |
| 30 | 13.0 | 7.4 | 14.0 | 7.8 | 11.6 | 6.8 | 11.5 | 6.1 | 11.2 | 6.9 | --- | --- |
| 31 | --- | --- | 14.6 | 7.2 | --- | --- | 11.9 | 7.8 | 10.3 | 6.0 | --- | --- |
| MONTH | 16.3 | 6.9 | 16.5 | 6.6 | 14.5 | 5.2 | 13.8 | 4.8 | 12.5 | 4.8 | 10.8 | 5.6 |
| YEAR | 18.9 | 4.8 | | | | | | | | | | |

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | OXYGEN, DISSOLVED (MG/L) (00300) | OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) (00310) | CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916) | MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 03... | 1100 | 40 | 685 | -- | 11.0 | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 19... | 1125 | 91 | 540 | -- | 9.0 | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 11... | 0935 | 50 | 420 | -- | 4.5 | -- | <3.0 | 70 | 38 |
| JAN , 1986 | | | | | | | | | |
| 14... | 1350 | 43 | 580 | -- | 4.0 | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 07... | 1040 | 59 | 490 | -- | 3.5 | -- | -- | -- | -- |
| 19... | 1240 | 44 | 590 | -- | 6.0 | -- | -- | -- | -- |
| 19... | 1440 | 43 | -- | -- | 6.5 | 8.4 | -- | -- | -- |
| APR | | | | | | | | | |
| 07... | 1250 | 65 | 640 | -- | 13.5 | -- | -- | -- | -- |
| 30... | 1230 | 54 | 620 | -- | 13.5 | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 1315 | 49 | -- | 8.40 | 15.0 | -- | 2.8 | 69 | 40 |
| JUN | | | | | | | | | |
| 02... | 1220 | 42 | 610 | -- | 15.5 | -- | -- | -- | -- |
| 06... | 1210 | 44 | 640 | -- | 14.0 | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 24... | 1040 | 40 | -- | -- | 18.5 | -- | -- | -- | -- |
| SEP | | | | | | | | | |
| 05... | 1220 | 36 | 600 | -- | 14.0 | -- | -- | -- | -- |

05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929) | POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE (MG/L AS SO4) (00946) | FLUO-RIDE, TOTAL (MG/L AS F) (0' 51) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | IRON (UG/L AS FE) (71885) | MANGA-NESE (UG/L AS MN) (71883) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 11... | 7.0 | 1.0 | 290 | -- | 14 | .1 | 13 | 200 | 60 |
| JAN , 1986 | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 07... | 6.0 | 1.0 | 292 | 2.2 | 14 | .1 | 12 | 200 | 40 |
| JUN | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | | | |
| 01... | 0600 | 119 | 2.0 | .660 | 11 | 1.65 | -- |
| 01... | 1241 | 145 | 1.9 | .350 | 2.9 | 1.00 | -- |
| 01... | 1244 | 145 | 1.9 | .370 | 3.6 | 1.04 | -- |
| 01... | 1600 | 175 | 1.8 | 2.60 | 72 | 10.0 | -- |
| 01... | 2200 | 217 | 1.7 | .320 | 3.6 | 1.21 | -- |
| 02... | 0400 | 194 | 1.9 | .210 | 2.2 | .840 | -- |
| 02... | 1400 | 122 | 2.2 | .120 | 1.8 | .510 | -- |
| 03... | 0400 | 91 | 2.3 | .090 | 1.4 | .380 | -- |
| 18... | 1400 | 83 | 2.2 | .280 | 1.6 | .440 | -- |
| 18... | 2300 | 117 | 2.0 | .360 | 2.6 | .760 | -- |
| 19... | 0800 | 97 | 2.1 | .260 | 1.9 | .530 | -- |
| DEC | | | | | | | |
| 11... | 0935 | 50 | 2.5 | .020 | .20 | .080 | .055 |
| JAN , 1986 | | | | | | | |
| 14... | 1430 | 43 | 2.5 | <.020 | .20 | .070 | .040 |
| FEB | | | | | | | |
| 19... | 1440 | 43 | 2.4 | .020 | .20 | .060 | .043 |
| MAR | | | | | | | |
| 10... | 1100 | 85 | 2.2 | .530 | 3.8 | .880 | -- |
| 10... | 1600 | 114 | 2.3 | .890 | 4.2 | .960 | -- |
| 11... | 0100 | 104 | 2.5 | .830 | 3.0 | .640 | -- |
| 16... | 2359 | 111 | 2.3 | 1.20 | 4.0 | 1.00 | -- |
| 17... | 1200 | 96 | 2.4 | .570 | 2.1 | .490 | -- |
| 17... | 2359 | 129 | 2.2 | .840 | 3.5 | .880 | -- |
| 18... | 2100 | 202 | 2.0 | .880 | 3.9 | 1.05 | -- |
| 19... | 0600 | 236 | 2.0 | 1.00 | 5.0 | 1.39 | -- |
| 19... | 1000 | 208 | 2.0 | .830 | 3.3 | .890 | .450 |
| 20... | 1300 | 99 | 2.6 | .210 | 1.6 | .420 | -- |
| MAY | | | | | | | |
| 07... | 1315 | 49 | 2.0 | <.020 | .20 | .080 | .055 |
| 18... | 1000 | 91 | 2.4 | .210 | 1.7 | .430 | -- |
| JUN | | | | | | | |
| 24... | 0835 | 44 | 2.2 | .040 | .60 | .140 | -- |

## 05406500 BLACK EARTH CREEK AT BLACK EARTH, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|
| OCT , 1985 | | | |
| 04... | 1510 | 40 | 70 |
| 11... | 1522 | 47 | 38 |
| 12... | 1000 | 87 | 266 |
| 12... | 1300 | 86 | 271 |
| 12... | 1600 | 84 | 316 |
| 18... | 0938 | 49 | 29 |
| 27... | 0727 | 47 | 274 |
| 31... | 1518 | 44 | 16 |
| NOV | | | |
| 01... | 0300 | 91 | 194 |
| 01... | 0900 | 132 | 305 |
| 01... | 1240 | 145 | 209 |
| 01... | 1243 | 145 | 263 |
| 01... | 1405 | 155 | 231 |
| 01... | 1800 | 197 | 376 |
| 01... | 2400 | 217 | 267 |
| 02... | 0800 | 157 | 155 |
| 02... | 1800 | 108 | 94 |
| 03... | 0800 | 84 | 88 |
| 07... | 1424 | 66 | 26 |
| 14... | 0748 | 79 | 45 |
| 16... | 0400 | 83 | 127 |
| 16... | 2300 | 80 | 113 |
| 18... | 1700 | 93 | 138 |
| 18... | 2000 | 105 | 187 |
| 19... | 0200 | 111 | 242 |
| 19... | 0500 | 104 | 164 |
| 22... | 0759 | 60 | 45 |
| DEC | | | |
| 06... | 1616 | 51 | 40 |
| 11... | 0935 | 50 | 47 |
| 11... | 1440 | 51 | 30 |
| 13... | 0830 | 47 | 25 |
| 22... | 1652 | 44 | 29 |
| 29... | 0838 | 43 | 67 |
| JAN , 1986 | | | |
| 05... | 1627 | 43 | 29 |
| 12... | 0918 | 44 | 67 |
| 19... | 1659 | 45 | 47 |
| 24... | 0829 | 44 | 29 |
| 30... | 1506 | 42 | 81 |
| FEB | | | |
| 06... | 1247 | 59 | 72 |
| 14... | 0810 | 44 | 68 |
| FEB , 1986 | | | |
| 19... | 1440 | 43 | 11 |
| 20... | 1025 | 45 | 23 |
| 28... | 0802 | 39 | 80 |
| MAR | | | |
| 07... | 0803 | 39 | 24 |
| 10... | 1100 | 85 | 470 |
| 10... | 1900 | 116 | 267 |
| 11... | 0400 | 99 | 207 |
| 11... | 0830 | 92 | 147 |
| 13... | 1630 | 80 | 145 |
| 16... | 2100 | 115 | 191 |
| 17... | 0900 | 97 | 117 |
| 18... | 0300 | 137 | 335 |
| 18... | 1800 | 202 | 758 |
| 19... | 0300 | 227 | 228 |
| 19... | 0905 | 217 | 161 |
| 19... | 1000 | 208 | 510 |
| 19... | 2400 | 134 | 360 |
| 20... | 1723 | 102 | 34 |
| 20... | 1800 | 100 | 234 |
| 21... | 0910 | 82 | 48 |
| 27... | 1512 | 69 | 117 |
| APR | | | |
| 02... | 1654 | 63 | 105 |
| 11... | 0754 | 58 | 19 |
| 14... | 1600 | 94 | 90 |
| 14... | 2200 | 82 | 78 |
| 18... | 0842 | 58 | 130 |
| 26... | 1052 | 60 | 17 |
| MAY | | | |
| 02... | 0758 | 55 | 62 |
| 07... | 1315 | 49 | 25 |
| 08... | 1856 | 44 | 156 |
| 18... | 1000 | 91 | 81 |
| 25... | 0746 | 48 | 83 |
| 31... | 0818 | 48 | 43 |
| JUN | | | |
| 07... | 0819 | 44 | 28 |
| 13... | 0759 | 48 | 31 |
| 22... | 0834 | 60 | 39 |
| 26... | 0809 | 42 | 27 |
| JUL | | | |
| 07... | 1919 | 41 | 28 |
| 12... | 1030 | 61 | 60 |

## 05407000 WISCONSIN RIVER AT MUSCODA, WI
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°11'54", long 90°26'26", in NW 1/4 sec.1, T.8 N., R.1 W., Grant County, Hydrologic Unit 07070005, on left bank at bridge on State Highway 80, 0.5 mi upstream from Eagle Mill Creek and 1.0 mi north of Muscoda.

DRAINAGE AREA.--10,400 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1902 to December 1903, October 1913 to current year. Monthly discharge only for October and November 1913, published in WSP 1308. Gage-height records collected at same site November 1908 to December 1912 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 785: 1921(M). WSP 875: 1921. WSP 1308: 1915(M), 1917-18(M), 1920-21(M), 1924(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 666.77 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except those for ice-affected period, which is fair. Flow regulated by 23 reservoirs and many powerplants upstream from station. In 1938 when the maximum of record occurred, there were 21 reservoirs upstream from station, the two large reservoirs, Petenwell and Castle Rock were not yet in existence. Usually less than 20 ft$^3$/s was diverted out of basin through Portage Canal to Fox River throughout the year. Gage-height telemeter and data-collection platform at station.

AVERAGE DISCHARGE.--73 years (1914-86), 8,757 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,800 ft$^3$/s Sept. 16, 1938, gage height, 11.48 ft; minimum daily, 2,000 ft$^3$/s Feb. 11, 1918.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,600 ft$^3$/s Apr. 6, gage height, 8.89 ft; minimum discharge, 4,560 ft$^3$/s Sept. 9, gage height, 1.14 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Mar. 24.)

| | | | |
|---|---|---|---|
| 1.0 | 4,180 | 5.0 | 20,200 |
| 2.0 | 7,260 | 7.0 | 32,400 |
| 3.0 | 11,100 | 9.0 | 48,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15500 | 10100 | 8000 | 9600 | 10000 | 9400 | 31400 | 9980 | 5460 | 10300 | 10900 | 6080 |
| 2 | 15600 | 12300 | 9000 | 9600 | 10000 | 9400 | 38200 | 9880 | 6170 | 9220 | 10800 | 5750 |
| 3 | 20000 | 13600 | 7200 | 9600 | 11000 | 9600 | 43300 | 10100 | 5410 | 8730 | 10600 | 5320 |
| 4 | 23800 | 17200 | 7600 | 9600 | 11000 | 9600 | 44500 | 9450 | 4990 | 7200 | 9000 | 5180 |
| 5 | 26400 | 22500 | 9200 | 9600 | 12000 | 9200 | 46500 | 8870 | 5160 | 6640 | 8240 | 5080 |
| 6 | 25000 | 27200 | 11000 | 9600 | 12000 | 9400 | 46600 | 9430 | 5360 | 7300 | 7430 | 5630 |
| 7 | 21600 | 29800 | 11000 | 10000 | 11000 | 9400 | 44100 | 8540 | 5040 | 6720 | 7290 | 5340 |
| 8 | 23500 | 29500 | 12000 | 9800 | 10000 | 10000 | 39600 | 8410 | 5350 | 5600 | 6620 | 5130 |
| 9 | 27200 | 24500 | 12000 | 9600 | 10000 | 9600 | 31400 | 8490 | 5420 | 5510 | 6440 | 4860 |
| 10 | 30200 | 19300 | 12000 | 10000 | 11000 | 10000 | 20700 | 7890 | 5500 | 5250 | 6750 | 5420 |
| 11 | 30000 | 18000 | 13000 | 10000 | 10000 | 11000 | 18100 | 7830 | 5760 | 4840 | 6580 | 6460 |
| 12 | 25700 | 18700 | 13000 | 10000 | 9800 | 10000 | 16200 | 7730 | 5520 | 5050 | 6540 | 10600 |
| 13 | 22800 | 18400 | 13000 | 9600 | 9600 | 10000 | 14500 | 7830 | 5700 | 5390 | 6280 | 13900 |
| 14 | 21200 | 14500 | 12000 | 10000 | 9400 | 10000 | 13400 | 8120 | 6390 | 5670 | 5770 | 14000 |
| 15 | 20200 | 13500 | 12000 | 9600 | 9800 | 10000 | 13200 | 8480 | 6310 | 7040 | 5580 | 15600 |
| 16 | 19900 | 13800 | 11000 | 10000 | 9400 | 11000 | 13400 | 8610 | 6680 | 6500 | 5710 | 15900 |
| 17 | 17200 | 13000 | 12000 | 9600 | 9000 | 12000 | 12900 | 8570 | 6440 | 6660 | 6020 | 13800 |
| 18 | 14500 | 13700 | 11000 | 9400 | 9200 | 12000 | 12300 | 9860 | 6610 | 6210 | 5990 | 13300 |
| 19 | 13300 | 13400 | 11000 | 9400 | 9600 | 13000 | 12100 | 8760 | 5920 | 7470 | 6590 | 13200 |
| 20 | 12100 | 14100 | 11000 | 9800 | 9400 | 15000 | 12100 | 9160 | 5270 | 9000 | 7500 | 13300 |
| 21 | 12400 | 15300 | 11000 | 10000 | 9800 | 16000 | 13200 | 8470 | 5510 | 10200 | 6560 | 14200 |
| 22 | 11900 | 18700 | 11000 | 10000 | 9600 | 17000 | 14000 | 9170 | 6610 | 14500 | 6160 | 15100 |
| 23 | 12300 | 21900 | 11000 | 9800 | 9200 | 18000 | 13900 | 9110 | 9190 | 16500 | 6050 | 16200 |
| 24 | 11800 | 21500 | 10000 | 9600 | 10000 | 19000 | 12600 | 8040 | 7400 | 12300 | 6100 | 19100 |
| 25 | 11200 | 17300 | 10000 | 9400 | 9600 | 19700 | 11400 | 8190 | 7460 | 10200 | 6010 | 24100 |
| 26 | 12500 | 14700 | 9400 | 9000 | 9800 | 20800 | 11700 | 8010 | 6570 | 8430 | 6080 | 31600 |
| 27 | 11500 | 13500 | 9000 | 8600 | 10000 | 20800 | 11000 | 7360 | 6560 | 7760 | 7990 | 37800 |
| 28 | 11000 | 12100 | 9000 | 8200 | 8600 | 21000 | 10300 | 6790 | 7200 | 8440 | 7630 | 36000 |
| 29 | 10400 | 11300 | 9000 | 7200 | --- | 22300 | 9760 | 6510 | 10600 | 8970 | 6810 | 35300 |
| 30 | 10000 | 10500 | 9400 | 9000 | --- | 25400 | 10100 | 6410 | 12600 | 9440 | 6650 | 39800 |
| 31 | 9220 | --- | 9800 | 10000 | --- | 28600 | --- | 6050 | --- | 10800 | 6350 | --- |
| TOTAL | 549920 | 513900 | 326600 | 295200 | 279800 | 438200 | 642460 | 260100 | 194160 | 253840 | 219020 | 453050 |
| MEAN | 17740 | 17130 | 10540 | 9523 | 9993 | 14140 | 21420 | 8390 | 6472 | 8188 | 7065 | 15100 |
| MAX | 30200 | 29800 | 13000 | 10000 | 12000 | 28600 | 46600 | 10100 | 12600 | 16500 | 10900 | 39800 |
| MIN | 9220 | 10100 | 7200 | 7200 | 8600 | 9200 | 9760 | 6050 | 4990 | 4840 | 5580 | 4860 |

CAL YR 1985 TOTAL 4284860 MEAN 11740 MAX 31200 MIN 4130
WTR YR 1986 TOTAL 4426250 MEAN 12130 MAX 46600 MIN 4840

## 05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED
## (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1971, 1975 to current year.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUCTANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TUR-BID-ITY (NTU) (00076) | OXYGEN, DIS-SOLVED (MG/L) (00300) | BARO-METRIC PRES-SURE (MM OF HG) (00025) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 27400 | -- | 205 | 7.90 | 11.0 | 6.0 | 8.1 | 745 | 75 |
| JAN , 1986<br>08... | 1410 | -- | 9800 | 220 | 7.30 | .0 | 3.5 | 8.9 | 757 | 61 |
| MAR<br>27... | 1200 | 20700 | -- | 200 | 7.60 | 4.0 | 7.0 | 12.2 | 752 | 94 |
| MAY<br>30... | 1100 | 6420 | -- | 250 | 8.60 | 19.5 | 10 | 9.9 | 744 | 111 |
| JUL<br>17... | 1215 | 6750 | -- | 260 | 7.90 | 27.5 | 4.0 | 9.3 | 747 | 120 |
| SEP<br>04... | 1130 | 5250 | -- | 280 | 8.10 | 21.5 | 6.6 | 9.4 | 745 | 109 |

| DATE | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673) | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | PERCENT SODIUM (00932) | SODIUM AD-SORP-TION RATIO (00931) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 54 | 79 | 75 | 13 | 18 | 7.3 | 8.9 | 20 | .5 | 2.1 |
| JAN , 1986<br>08... | <1 | 21 | 100 | 0 | 23 | 11 | 6.0 | 11 | .3 | 2.3 |
| MAR<br>27... | K2 | 21 | 87 | 10 | 20 | 8.9 | 5.8 | 12 | .3 | 2.4 |
| MAY<br>30... | 67 | 42 | 110 | 14 | 23 | 12 | 4.9 | 9 | .2 | 1.5 |
| JUL<br>17... | 100 | 57 | 110 | 13 | 24 | 11 | 6.1 | 11 | .3 | 2.1 |
| SEP<br>04... | 110 | 810 | 120 | 21 | 28 | 13 | 8.2 | 12 | .3 | 1.9 |

| DATE | BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440) | CAR-BONATE IT-FLD (MG/L AS CO3) (99445) | ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3) (99430) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 76 | -- | 61 | 1.5 | 15 | 14 | <.10 | 2.2 | 132 |
| JAN , 1986<br>08... | 142 | -- | 115 | 11 | 13 | 9.9 | <.10 | 10 | 139 |
| MAR<br>27... | 93 | -- | 75 | 3.7 | 19 | 11 | .10 | 9.8 | 125 |
| MAY<br>30... | -- | -- | 96 | .5 | 12 | 8.4 | <.10 | 1.0 | 125 |
| JUL<br>17... | 112 | -- | 90 | 2.2 | 13 | 10 | <.10 | 6.9 | 141 |
| SEP<br>04... | 125 | -- | 101 | 1.6 | 16 | 11 | .20 | 3.5 | 148 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303) | SOLIDS, DIS-SOLVED (TONS PER DAY) (70302) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 110 | .18 | 9770 | .26 | .130 | 1.0 | .080 | .060 | .030 |
| JAN , 1986<br>08... | 150 | .19 | 3680 | .83 | .120 | .80 | .050 | .030 | .030 |
| MAR<br>27... | 130 | .17 | 6990 | 1.1 | .230 | .80 | .100 | .050 | .040 |
| MAY<br>30... | 120 | .17 | 2170 | .22 | .020 | .90 | .060 | .010 | <.010 |
| JUL<br>17... | 130 | .19 | 2570 | .50 | .030 | 1.1 | .090 | .030 | .020 |
| SEP<br>04... | 140 | .20 | 2100 | .19 | .020 | 1.0 | .080 | .030 | <.010 |

K RESULTS BASED ON COUNT OUTSIDE OF THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

## 05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | ARSENIC DIS-SOLVED (UG/L AS AS) (01000) | BARIUM, DIS-SOLVED (UG/L AS BA) (01005) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010) | CADMIUM DIS-SOLVED (UG/L AS CD) (01025) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030) | COBALT, DIS-SOLVED (UG/L AS CO) (01035) | COPPER, DIS-SOLVED (UG/L AS CU) (01040) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 27400 | 10 | <1 | 23 | .6 | 1 | <1 | <3 | 6 |
| MAR , 1986<br>27... | 1200 | 20700 | 30 | <1 | 23 | <.5 | <1 | <1 | <3 | 4 |
| SEP<br>04... | 1130 | 5250 | <10 | <1 | 23 | <.5 | <1 | <1 | <3 | <1 |

| DATE | IRON, DIS-SOLVED (UG/L AS FE) (01046) | LEAD, DIS-SOLVED (UG/L AS PB) (01049) | LITHIUM DIS-SOLVED (UG/L AS LI) (01130) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | MERCURY DIS-SOLVED (UG/L AS HG) (71890) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060) | NICKEL, DIS-SOLVED (UG/L AS NI) (01065) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080) | VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085) | ZINC, DIS-SOLVED (UG/L AS ZN) (01090) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 320 | 2 | 8 | 11 | .1 | <10 | 15 | <1 | 35 | <6 | 23 |
| MAR , 1986<br>27... | 360 | 2 | 5 | 16 | <.1 | <10 | 2 | <1 | 35 | <6 | 26 |
| SEP<br>04... | 13 | <5 | <4 | 3 | <.1 | <10 | 16 | <1 | 48 | <6 | 7 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985<br>09... | 1345 | 27400 | -- | 205 | 11.0 | 63 | 4660 | 43 |
| JAN , 1986<br>08... | 1410 | -- | 9800 | 220 | .0 | 4 | 106 | 86 |
| MAR<br>27... | 1200 | 20700 | -- | 200 | 4.0 | 82 | 4580 | 32 |
| MAY<br>30... | 1100 | 6420 | -- | 250 | 19.5 | 25 | 433 | 84 |
| JUL<br>17... | 1215 | 6750 | -- | 260 | 27.5 | 21 | 383 | 77 |
| SEP<br>04... | 1130 | 5250 | -- | 280 | 21.5 | 22 | 312 | 82 |

## 05408000 KICKAPOO RIVER AT LA FARGE, WI

LOCATION.--Lat 43°34'27", long 90°38'35", on east-west quarter section line in W 1/2 sec.29, T.13 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on left bank 10 ft upstream from bridge on State Highway 82, in La Farge, 0.3 mi upstream from Otter Creek, and 1.3 mi downstream from powerplant.

DRAINAGE AREA.--266 $mi^2$.

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1388: 1951(M), 1954(M). WSP 1438: 1944-45(M), 1946, 1948, 1950(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 781.54 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

REMARKS.--Estimated daily discharge: Mar. 19, Sept. 22-30, and ice period listed in rating table below. Records good except those for ice-affected period and estimated record, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 179 $ft^3/s$, 9.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 $ft^3/s$ July 1, 1978, gage height, 14.92 ft; minimum, 1.8 $ft^3/s$ Mar. 24, 1951; minimum daily, 36 $ft^3/s$ Nov. 3, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 19 | 1445 | *2,220 | A *10.51 | No other peaks above base. | | | |

A Outside gage reading.

Minimum daily discharge, 100 $ft^3/s$ Aug. 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 22 to Mar. 10.)

| | | | |
|---|---|---|---|
| 2.4 | 99 | 6.0 | 813 |
| 3.0 | 183 | 8.0 | 1,380 |
| 4.0 | 358 | 10.0 | 2,040 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 316 | 417 | 220 | 210 | 200 | 200 | 275 | 187 | 146 | 176 | 151 | 133 |
| 2 | 242 | 471 | 220 | 210 | 200 | 210 | 259 | 181 | 142 | 161 | 142 | 126 |
| 3 | 221 | 283 | 220 | 210 | 200 | 260 | 259 | 175 | 136 | 156 | 137 | 126 |
| 4 | 212 | 243 | 210 | 210 | 210 | 240 | 312 | 176 | 141 | 146 | 162 | 144 |
| 5 | 255 | 222 | 210 | 210 | 230 | 220 | 298 | 178 | 146 | 143 | 132 | 140 |
| 6 | 224 | 213 | 210 | 210 | 220 | 160 | 294 | 180 | 152 | 133 | 100 | 122 |
| 7 | 206 | 221 | 210 | 210 | 210 | 140 | 257 | 171 | 148 | 145 | 131 | 126 |
| 8 | 204 | 206 | 210 | 210 | 210 | 160 | 244 | 170 | 145 | 133 | 153 | 121 |
| 9 | 194 | 221 | 210 | 210 | 200 | 210 | 231 | 167 | 135 | 136 | 139 | 126 |
| 10 | 187 | 221 | 210 | 220 | 200 | 210 | 223 | 167 | 138 | 131 | 133 | 158 |
| 11 | 186 | 216 | 210 | 220 | 200 | 205 | 220 | 164 | 187 | 143 | 133 | 1110 |
| 12 | 215 | 220 | 210 | 230 | 200 | 195 | 218 | 183 | 267 | 148 | 126 | 313 |
| 13 | 227 | 226 | 210 | 230 | 200 | 192 | 216 | 175 | 174 | 182 | 125 | 202 |
| 14 | 200 | 262 | 210 | 220 | 200 | 210 | 243 | 203 | 153 | 146 | 130 | 189 |
| 15 | 193 | 246 | 210 | 210 | 200 | 223 | 303 | 189 | 151 | 139 | 152 | 207 |
| 16 | 191 | 349 | 210 | 210 | 200 | 235 | 250 | 235 | 157 | 211 | 137 | 179 |
| 17 | 187 | 390 | 210 | 210 | 200 | 290 | 228 | 202 | 140 | 152 | 127 | 174 |
| 18 | 194 | 317 | 210 | 220 | 200 | 909 | 218 | 226 | 133 | 134 | 119 | 178 |
| 19 | 194 | 366 | 210 | 230 | 200 | 2040 | 218 | 190 | 143 | 144 | 122 | 179 |
| 20 | 185 | 288 | 210 | 220 | 200 | 777 | 215 | 176 | 137 | 145 | 114 | 201 |
| 21 | 181 | 221 | 210 | 210 | 200 | 443 | 209 | 170 | 138 | 126 | 123 | 251 |
| 22 | 180 | 220 | 210 | 210 | 200 | 401 | 200 | 163 | 166 | 128 | 116 | 480 |
| 23 | 188 | 220 | 210 | 210 | 200 | 721 | 198 | 168 | 158 | 124 | 120 | 430 |
| 24 | 231 | 210 | 210 | 210 | 200 | 655 | 193 | 163 | 176 | 123 | 119 | 350 |
| 25 | 196 | 210 | 210 | 210 | 200 | 534 | 199 | 160 | 149 | 459 | 117 | 450 |
| 26 | 187 | 210 | 210 | 200 | 200 | 914 | 204 | 162 | 138 | 243 | 476 | 360 |
| 27 | 183 | 210 | 210 | 200 | 200 | 419 | 207 | 157 | 367 | 152 | 233 | 300 |
| 28 | 175 | 210 | 210 | 200 | 200 | 351 | 200 | 160 | 243 | 242 | 144 | 350 |
| 29 | 174 | 210 | 210 | 200 | --- | 345 | 201 | 152 | 173 | 191 | 139 | 420 |
| 30 | 174 | 210 | 210 | 200 | --- | 315 | 197 | 153 | 163 | 215 | 138 | 350 |
| 31 | 176 | --- | 210 | 200 | --- | 284 | --- | 150 | --- | 183 | 135 | --- |
| TOTAL | 6278 | 7729 | 6540 | 6560 | 5680 | 12668 | 6989 | 5453 | 4942 | 5190 | 4525 | 7995 |
| MEAN | 203 | 258 | 211 | 212 | 203 | 409 | 233 | 176 | 165 | 167 | 146 | 267 |
| MAX | 316 | 471 | 220 | 230 | 230 | 2040 | 312 | 235 | 367 | 459 | 476 | 1110 |
| MIN | 174 | 206 | 210 | 200 | 200 | 140 | 193 | 150 | 133 | 123 | 100 | 121 |
| CFSM | .76 | .97 | .79 | .80 | .76 | 1.54 | .88 | .66 | .62 | .63 | .55 | 1.00 |
| IN. | .88 | 1.08 | .91 | .92 | .79 | 1.77 | .98 | .76 | .69 | .73 | .63 | 1.12 |

CAL YR 1985 TOTAL 89252 MEAN 245 MAX 1700 MIN 137 CFSM .92 IN 12.48
WTR YR 1986 TOTAL 80549 MEAN 221 MAX 2040 MIN 100 CFSM .83 IN 11.26

## 05410490 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°10'58", long 90°51'30", in NE 1/4 SW 1/4 sec.9, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank at upstream corner of town road bridge at Steuben and 18.6 mi upstream from mouth.

DRAINAGE AREA.--687 mi$^2$.

PERIOD OF RECORD.--May 1933 to current year.

REVISED RECORDS.--WSP 855: Drainage area. WSP 1438: 1933-38. WDR WI-79-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 657.00 ft above National Geodetic Vertical Datum of 1929. May 1933 to Oct. 19, 1938, nonrecording gage at same site at datum 1.7 ft higher. Oct. 20, 1938 to September 1982, recording gage at site 1.2 mi downstream at datum 0.36 ft higher.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except for ice-affected period, which is fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 486 ft$^3$/s, 9.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft$^3$/s July 3, 1978, gage height, 14.81 ft; minimum observed, 161 ft$^3$/s Aug. 9, 1936, gage height, 0.76 ft site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 22 | 1600 | *2,330 | *12.37 | No other peak greater than base discharge. | | | |

Minimum daily discharge, 400 ft$^3$/s Jan. 28.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Oct. 1 to Nov. 23; stage-discharge relation affected by ice Nov. 24 to Mar. 9.)

| | | | |
|---|---|---|---|
| 6.5 | 430 | 10.0 | 1,120 |
| 7.0 | 511 | 11.0 | 1,400 |
| 8.0 | 690 | 12.0 | 1,890 |
| 9.0 | 882 | 12.3 | 2,220 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 901 | 610 | 560 | 450 | 420 | 420 | 831 | 606 | 495 | 505 | 662 | 492 |
| 2 | 925 | 777 | 520 | 450 | 420 | 430 | 793 | 593 | 484 | 509 | 536 | 481 |
| 3 | 723 | 954 | 480 | 450 | 420 | 440 | 782 | 570 | 474 | 499 | 504 | 471 |
| 4 | 654 | 820 | 500 | 450 | 420 | 450 | 780 | 560 | 470 | 482 | 480 | 470 |
| 5 | 634 | 688 | 500 | 450 | 450 | 460 | 826 | 561 | 467 | 471 | 473 | 469 |
| 6 | 632 | 646 | 500 | 440 | 440 | 460 | 831 | 565 | 471 | 463 | 480 | 473 |
| 7 | 645 | 629 | 490 | 430 | 440 | 450 | 817 | 558 | 485 | 457 | 459 | 460 |
| 8 | 607 | 615 | 490 | 430 | 430 | 440 | 770 | 548 | 486 | 451 | 453 | 446 |
| 9 | 589 | 622 | 490 | 430 | 430 | 470 | 730 | 535 | 475 | 457 | 486 | 447 |
| 10 | 575 | 623 | 480 | 450 | 420 | 568 | 704 | 532 | 472 | 448 | 478 | 471 |
| 11 | 558 | 622 | 480 | 460 | 420 | 585 | 689 | 530 | 487 | 455 | 460 | 572 |
| 12 | 571 | 616 | 470 | 460 | 420 | 588 | 677 | 537 | 533 | 465 | 450 | 979 |
| 13 | 604 | 631 | 470 | 450 | 420 | 606 | 671 | 543 | 625 | 483 | 441 | 1090 |
| 14 | 627 | 673 | 470 | 440 | 420 | 636 | 689 | 577 | 564 | 492 | 443 | 740 |
| 15 | 602 | 694 | 470 | 440 | 420 | 661 | 736 | 597 | 516 | 483 | 456 | 624 |
| 16 | 574 | 735 | 470 | 440 | 420 | 695 | 792 | 624 | 501 | 464 | 464 | 611 |
| 17 | 561 | 806 | 470 | 450 | 420 | 748 | 747 | 636 | 485 | 488 | 457 | 596 |
| 18 | 579 | 917 | 470 | 460 | 420 | 1020 | 700 | 665 | 478 | 502 | 437 | 575 |
| 19 | 593 | 872 | 470 | 450 | 420 | 1430 | 677 | 639 | 469 | 455 | 427 | 576 |
| 20 | 582 | 835 | 470 | 440 | 420 | 1520 | 666 | 611 | 464 | 457 | 417 | 578 |
| 21 | 572 | 785 | 470 | 440 | 420 | 1670 | 658 | 566 | 461 | 455 | 417 | 689 |
| 22 | 557 | 689 | 460 | 440 | 420 | 2170 | 643 | 546 | 484 | 440 | 412 | 733 |
| 23 | 553 | 656 | 460 | 440 | 420 | 2000 | 628 | 536 | 517 | 425 | 415 | 791 |
| 24 | 581 | 620 | 460 | 440 | 420 | 1610 | 616 | 528 | 513 | 422 | 412 | 902 |
| 25 | 604 | 580 | 460 | 440 | 420 | 1460 | 612 | 526 | 481 | 523 | 412 | 783 |
| 26 | 599 | 580 | 460 | 430 | 420 | 1380 | 620 | 523 | 486 | 851 | 552 | 751 |
| 27 | 560 | 560 | 460 | 420 | 420 | 1320 | 626 | 518 | 468 | 804 | 1080 | 749 |
| 28 | 542 | 560 | 460 | 400 | 420 | 1320 | 621 | 514 | 557 | 580 | 1060 | 684 |
| 29 | 529 | 540 | 460 | 420 | --- | 1130 | 610 | 513 | 711 | 598 | 637 | 769 |
| 30 | 520 | 540 | 460 | 430 | --- | 963 | 625 | 507 | 540 | 603 | 534 | 952 |
| 31 | 522 | --- | 450 | 420 | --- | 890 | --- | 501 | --- | 619 | 507 | --- |
| TOTAL | 18875 | 20495 | 14780 | 13640 | 11850 | 28990 | 21167 | 17365 | 15119 | 15806 | 15901 | 19424 |
| MEAN | 609 | 683 | 477 | 440 | 423 | 935 | 706 | 560 | 504 | 510 | 513 | 647 |
| MAX | 925 | 954 | 560 | 460 | 450 | 2170 | 831 | 665 | 711 | 851 | 1080 | 1090 |
| MIN | 520 | 540 | 450 | 400 | 420 | 420 | 610 | 501 | 461 | 422 | 412 | 446 |
| CFSM | .89 | .99 | .69 | .64 | .62 | 1.36 | 1.03 | .82 | .73 | .74 | .75 | .94 |
| IN. | 1.02 | 1.11 | .80 | .74 | .64 | 1.57 | 1.15 | .94 | .82 | .86 | .86 | 1.05 |

CAL YR 1985 TOTAL 248411 MEAN 681 MAX 3100 MIN 430 CFSM .99 IN 13.45
WTR YR 1986 TOTAL 213412 MEAN 585 MAX 2170 MIN 400 CFSM .85 IN 11.56

## RESERVOIRS IN WISCONSIN RIVER BASIN

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power generation and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnishes the gage heights and capacity tables. Revised capacity tables for all 21 reservoirs were received from the Company in April 1957 and were used to compute month-end usable contents beginning Sept. 30, 1955. Another revised capacity table for Burnt Rollways Reservoir was used to compute month-end usable contents beginning Sept. 30, 1964. Lake Dubay is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft$^3$. Drainage area, 34.4 mi$^2$.

05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft$^3$. Drainage area, 26 mi$^2$.

05390200 Buckatabon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 mi southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft$^3$. Drainage area, 16.9 mi$^2$.

05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft$^3$. Drainage area, 12.1 mi$^2$.

05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft$^3$. Drainage area, 28.8 mi$^2$.

05390350 Burnt Rollways Reservoir on Eagle River, lat 45°53'40", long 89°08'28", in NE 1/4 NW 1/4 sec.5, T.39 N., R.11 E., Oneida County, 5.3 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft$^3$. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi$^2$.

05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 mi southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft$^3$. Drainage area, 22.9 mi$^2$.

05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.11 E., Vilas County, 6.3 mi northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft$^3$. Drainage area, 2.47 mi$^2$.

05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 mi southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft$^3$. Drainage area, 48.4 mi$^2$.

05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'57", long 89°27'08", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft$^3$. Drainage area, 19 mi$^2$.

05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi south of Sayner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft$^3$. Drainage area, 73.1 mi$^2$.

05390800 Pickerel Lake on St. Germain River, lat 45°52'22", long 89°31'47", in NE 1/4 sec.18, T.39 N., R.8 E., Oneida County, 5.0 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft$^3$. Drainage area, 86.2 mi$^2$.

05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft upstream from U.S. Geological Survey river gaging station, 2.7 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft$^3$. Drainage area, 744 mi$^2$.

05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 mi northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft$^3$. Drainage area, 19.8 mi$^2$.

05391300 North Pelican Lake (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mi below Twin Lakes Creek and 8.0 mi east of Rhinelander city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft$^3$. Drainage area, 95 mi$^2$.

05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft$^3$. Drainage area, 72.5 mi$^2$.

05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft$^3$. Drainage area, 15.2 mi$^2$.

05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft$^3$. Drainage area, 310 mi$^2$.

05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft$^3$. Drainage area, 544 mi$^2$.

05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft$^3$. Drainage area, 158 mi$^2$.

## RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

05399600 Big Eau Pleine Reservoir on Big Eau Pleine River, lat 44°43'52", long 89°45'35", in SW 1/4 sec.14, T.26 N., R.6 E., Marathon County, 3.0 mi northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft$^3$. Drainage area, 363 mi$^2$.

05400295 Lake Dubay on Wisocnsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 mi downstream of Little Eau Pleine River and 10.5 mi northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft$^3$. Drainage area, 4,900 mi$^2$.

05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 mi upstream from Roche a Cri Creek, 2.4 mi west of Strongs Prairie, and 3.5 mi northeast of Necedah, used as a reservoir since 1950, has a total capacity of 19,880,000,000 ft$^3$. Drainage area, 5,970 mi$^2$.

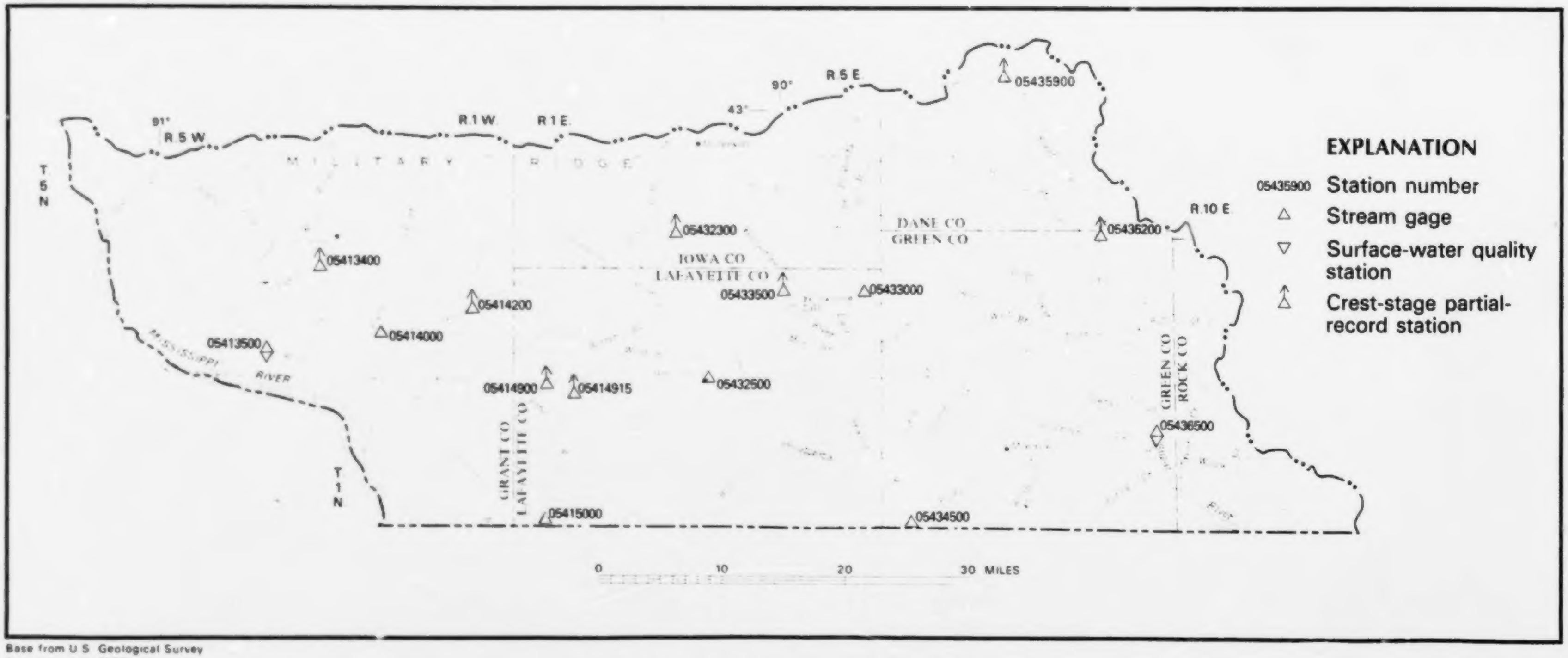
05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi upstream from Duck Creek, and 2.0 mi south of Germantown, and 7.0 mi northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft$^3$. Drainage area, 7,056 mi$^2$.

### MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1985 to SEPTEMBER 1986

| | LAC VIEUX DESERT | TWIN LAKES | BUCKATABON LAKE | SEVENMILE LAKE | LOWER NINEMILE LAKE | BURNT ROLLWAYS RESERVOIR | LONG LAKE | DEERSKIN LAKE |
|---|---|---|---|---|---|---|---|---|
| SEPT. 30..... | 462 | 296 | 122 | 70 | 103 | 588 | 267 | 18 |
| OCT. 31..... | 363 | 274 | 116 | 65 | 103 | 558 | 233 | 16 |
| NOV. 30..... | 305 | 285 | 118 | 66 | 49 | 542 | 257 | 15 |
| DEC. 31..... | 203 | 172 | 82 | 18 | 41 | 187 | 178 | 11 |
| JAN. 31..... | 115 | 89 | 20 | 2 | 6 | 0 | 62 | 10 |
| FEB. 28..... | 73 | 5 | 19 | 1 | 0 | 0 | 4 | 11 |
| MAR. 31..... | 60 | 33 | 60 | 15 | 66 | 40 | 43 | 14 |
| APR. 30..... | 283 | 148 | 115 | 65 | 102 | 549 | 249 | 17 |
| MAY 31..... | 449 | 133 | 114 | 50 | 101 | 493 | 230 | 19 |
| JUNE 30..... | 254 | 128 | 114 | 60 | 102 | 511 | 232 | 19 |
| JULY 31..... | 275 | 151 | 114 | 64 | 102 | 555 | 252 | 17 |
| AUG. 31..... | 254 | 165 | 113 | 64 | 103 | 542 | 235 | 19 |
| SEPT. 30..... | 311 | 195 | 114 | 63 | 103 | 546 | 263 | 20 |

| | SUGAR CAMP RESERVOIR | LITTLE ST. GERMAIN LAKE | BIG ST. GERMAIN LAKE | PICKEREL LAKE | RAINBOW LAKE | SOUTH PELICAN LAKE | NORTH PELICAN LAKE | MINOCQUA LAKE |
|---|---|---|---|---|---|---|---|---|
| SEPT. 30..... | 423 | 78 | 165 | 280 | 1,753 | 300 | 146 | 522 |
| OCT. 31..... | 418 | 72 | 162 | 270 | 2,117 | 277 | 133 | 539 |
| NOV. 30..... | 406 | 70 | 158 | 261 | 2,030 | 274 | 128 | 491 |
| DEC. 31..... | 320 | 49 | 80 | 215 | 1,953 | 196 | 48 | 307 |
| JAN. 31..... | 252 | 27 | 42 | 180 | 1,584 | 112 | 39 | 149 |
| FEB. 28..... | 87 | 13 | 33 | 203 | 808 | 82 | 36 | 8 |
| MAR. 31..... | 150 | 26 | 52 | 162 | 703 | 136 | 87 | 58 |
| APR. 30..... | 410 | 70 | 156 | 268 | 2,136 | 266 | 135 | 264 |
| MAY 31..... | 398 | 67 | 159 | 264 | 1,561 | 254 | 129 | 315 |
| JUNE 30..... | 404 | 71 | 156 | 265 | 1,377 | 252 | 138 | 398 |
| JULY 31..... | 404 | 75 | 159 | 265 | 1,823 | 288 | 128 | 508 |
| AUG. 31..... | 401 | 67 | 160 | 262 | 1,685 | 261 | 133 | 496 |
| SEPT. 30..... | 447 | 69 | 156 | 271 | 2,119 | 305 | 149 | 556 |

| | SQUIRREL LAKE | WILLOW RESERVOIR | LAKE NOKOMIS | SPIRIT RIVER FLOWAGE | BIG EAU PLEINE RESERVOIR | LAKE DUBAY | PETENWELL FLOWAGE | CASTLE ROCK FLOWAGE |
|---|---|---|---|---|---|---|---|---|
| SEPT. 30..... | 170 | 3,286 | 1,771 | 745 | 4,373 | 4,233 | 17,747 | 5,916 |
| OCT. 31..... | 174 | 3,157 | 1,758 | 693 | 4,385 | 4,223 | 17,659 | 5,824 |
| NOV. 30..... | 152 | 3,208 | 1,627 | 685 | 4,406 | 4,163 | 17,738 | 5,844 |
| DEC. 31..... | 96 | 2,954 | 1,326 | 492 | 4,190 | 4,104 | 16,986 | 5,831 |
| JAN. 31..... | 22 | 2,112 | 1,112 | 311 | 3,333 | 4,194 | 15,215 | 5,356 |
| FEB. 28..... | 4 | 1,281 | 942 | 169 | 2,069 | 3,368 | 14,386 | 3,810 |
| MAR. 31..... | 60 | 940 | 655 | 522 | 3,972 | 3,666 | 15,948 | 4,986 |
| APR. 30..... | 161 | 2,990 | 1,739 | 702 | 4,379 | 4,317 | 18,222 | 6,268 |
| MAY 31..... | 170 | 2,688 | 1,540 | 580 | 3,975 | 4,311 | 18,046 | 6,262 |
| JUNE 30..... | 168 | 2,936 | 1,737 | 669 | 3,571 | 3,984 | 17,544 | 5,818 |
| JULY 31..... | 168 | 3,181 | 1,733 | 690 | 3,933 | 4,156 | 17,756 | 5,876 |
| AUG. 31..... | 164 | 2,792 | 1,396 | 612 | 3,799 | 4,181 | 17,562 | 5,824 |
| SEPT. 30..... | 169 | 3,190 | 1,737 | 691 | 4,277 | 4,017 | 17,307 | 5,773 |



Base from U.S. Geological Survey
State base map, 1968

PECATONICA-SUGAR RIVER BASIN

BEST COPY AVAILABLE

## 05413500 GRANT RIVER AT BURTON, WI

LOCATION.--Lat 42°43'13", long 90°49'09", in NW 1/4 sec.23, T.3 N., R.4 W., Grant County, Hydrologic Unit 07060003, on right bank at downstream side of highway bridge at Burton, 5.9 mi northwest of Potosi and 9.5 mi upstream from mouth.

DRAINAGE AREA.--269 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Published as "near Burton" October 1934 to September 1947. Records published for both sites March to September 1947. October 1934, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1935-37(M), 1941(M), 1945-46(M), 1949(M). WSP 1728: 1942(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.43 ft above National Geodetic Vertical Datum of 1929. Oct. 17, 1934, to Sept. 30, 1947, nonrecording gage at site 6 mi upstream at datum 33.18 ft higher. Mar. 18, 1947, to July 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: None, except for ice-affected period, Nov. 22 to Mar. 9. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--52 years, 169 ft$^3$/s, 8.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft$^3$/s July 16, 1950, gage height, 24.82 ft, from rating curve extended above 18,000 ft$^3$/s on basis of slope-area measurement of peak flow; minimum, 21 ft$^3$/s Mar. 4, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 19 | 0800 | *2,420 | *17.16 | No other peak greater than base discharge. | | | |

Minimum discharge, 88 ft$^3$/s, Jan. 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 172 | 227 | 160 | 98 | 98 | 98 | 264 | 198 | 176 | 172 | 128 | 120 |
| 2 | 139 | 237 | 150 | 98 | 98 | 100 | 252 | 187 | 169 | 167 | 125 | 119 |
| 3 | 132 | 179 | 120 | 98 | 100 | 110 | 252 | 183 | 167 | 162 | 124 | 119 |
| 4 | 129 | 162 | 130 | 98 | 110 | 110 | 263 | 183 | 170 | 159 | 123 | 132 |
| 5 | 129 | 154 | 140 | 98 | 130 | 110 | 265 | 185 | 197 | 156 | 124 | 124 |
| 6 | 125 | 152 | 130 | 98 | 130 | 100 | 252 | 188 | 177 | 154 | 146 | 118 |
| 7 | 123 | 157 | 120 | 96 | 120 | 96 | 242 | 181 | 174 | 156 | 140 | 117 |
| 8 | 123 | 147 | 120 | 96 | 110 | 120 | 235 | 184 | 171 | 165 | 138 | 116 |
| 9 | 126 | 148 | 110 | 96 | 100 | 140 | 231 | 180 | 165 | 161 | 132 | 118 |
| 10 | 138 | 149 | 110 | 98 | 98 | 185 | 232 | 177 | 178 | 158 | 132 | 178 |
| 11 | 130 | 140 | 110 | 100 | 96 | 253 | 232 | 179 | 206 | 177 | 129 | 238 |
| 12 | 158 | 141 | 100 | 100 | 96 | 233 | 230 | 191 | 182 | 169 | 123 | 187 |
| 13 | 167 | 155 | 100 | 100 | 96 | 279 | 228 | 180 | 170 | 158 | 123 | 142 |
| 14 | 140 | 159 | 100 | 100 | 96 | 398 | 234 | 220 | 172 | 148 | 147 | 132 |
| 15 | 134 | 151 | 100 | 100 | 96 | 351 | 250 | 205 | 196 | 147 | 157 | 132 |
| 16 | 129 | 157 | 100 | 100 | 96 | 374 | 226 | 264 | 198 | 148 | 131 | 126 |
| 17 | 125 | 161 | 100 | 110 | 96 | 462 | 216 | 224 | 176 | 145 | 128 | 124 |
| 18 | 134 | 168 | 100 | 110 | 100 | 926 | 212 | 263 | 166 | 142 | 123 | 134 |
| 19 | 165 | 208 | 100 | 110 | 110 | 1790 | 211 | 219 | 166 | 139 | 121 | 132 |
| 20 | 147 | 176 | 100 | 110 | 110 | 783 | 208 | 207 | 162 | 137 | 120 | 140 |
| 21 | 139 | 159 | 100 | 110 | 110 | 564 | 205 | 200 | 158 | 134 | 119 | 169 |
| 22 | 135 | 160 | 100 | 110 | 100 | 477 | 200 | 195 | 631 | 134 | 118 | 166 |
| 23 | 140 | 150 | 100 | 100 | 100 | 467 | 198 | 191 | 338 | 133 | 117 | 145 |
| 24 | 223 | 140 | 100 | 100 | 100 | 410 | 196 | 188 | 219 | 132 | 117 | 145 |
| 25 | 156 | 140 | 100 | 100 | 100 | 386 | 197 | 185 | 196 | 147 | 125 | 228 |
| 26 | 144 | 140 | 98 | 96 | 100 | 381 | 199 | 192 | 187 | 144 | 242 | 192 |
| 27 | 139 | 140 | 98 | 88 | 98 | 325 | 195 | 201 | 182 | 135 | 223 | 164 |
| 28 | 133 | 130 | 98 | 120 | 96 | 309 | 200 | 195 | 179 | 143 | 139 | 150 |
| 29 | 131 | 130 | 98 | 110 | --- | 300 | 201 | 185 | 172 | 141 | 128 | 210 |
| 30 | 129 | 140 | 98 | 100 | --- | 283 | 208 | 182 | 175 | 132 | 124 | 217 |
| 31 | 131 | --- | 98 | 98 | --- | 266 | --- | 178 | --- | 131 | 122 | --- |
| TOTAL | 4365 | 4757 | 3388 | 3146 | 2890 | 11186 | 6734 | 6090 | 5975 | 4626 | 4188 | 4534 |
| MEAN | 141 | 159 | 109 | 101 | 103 | 361 | 224 | 196 | 199 | 149 | 135 | 151 |
| MAX | 223 | 237 | 160 | 120 | 130 | 1790 | 265 | 264 | 631 | 177 | 242 | 238 |
| MIN | 123 | 130 | 98 | 88 | 96 | 96 | 195 | 177 | 158 | 131 | 117 | 116 |
| CFSM | .52 | .59 | .41 | .38 | .38 | 1.34 | .83 | .73 | .74 | .55 | .50 | .56 |
| IN. | .60 | .66 | .47 | .44 | .40 | 1.55 | .93 | .84 | .83 | .64 | .58 | .63 |

CAL YR 1985 TOTAL 70996 MEAN 195 MAX 3400 MIN 98 CFSM .73 IN 9.82
WTR YR 1986 TOTAL 61879 MEAN 170 MAX 1790 MIN 88 CFSM .63 IN 8.56

## 05413500 GRANT RIVER AT BURTON, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1977 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Water years 1977-82, October 1983 to current year.

REMARKS.--Sediment records for period during considerable discharge (greater than 300 $ft^3/s$) are good because *sampling and analysis effort* were concentrated on high-discharge periods. Records during remaining periods are fair because of infrequent (about twice per week) sampling. Monthly load values are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,450 mg/L June 17, 1978; minimum daily mean, 7 mg/L on many days. Maximum observed, 13.600 mg/L July 13, 1979; minimum observed, 7 mg/L Mar. 2, 1978.
SUSPENDED-SEDIMENT DISCHARGE: Maximum dail 95,300 tons June 17, 1978; minimum daily, 1.5 tons Mar. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,420 mg/L June 22, minimum daily mean, 29 mg/L Mar. 8. Maximum observed, 5,470 mg/L June 22; minimum observed, 45 mg/L July 24.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 3,540 tons June 22; minimum daily, 11 tons Mar. 7, 8.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 30... | 0900 | 131 | 640 | 7.5 |
| DEC | | | | |
| 19... | 1108 | 104 | 630 | .0 |
| JAN , 1986 | | | | |
| 27... | 1555 | 86 | 720 | .0 |
| MAR | | | | |
| 10... | 1514 | 194 | 580 | 2.5 |
| APR , 1986 | | | | |
| 21... | 1630 | 204 | 615 | 11.5 |
| JUN | | | | |
| 09... | 1521 | 163 | 640 | 22.5 |
| AUG | | | | |
| 04... | 1440 | 123 | 600 | 23.0 |
| SEP | | | | |
| 22... | 1605 | 164 | 640 | 20.0 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|
| OCT , 1985 | | | |
| 08... | 1345 | 124 | 119 |
| 12... | 0955 | 146 | 67 |
| 12... | 1440 | 157 | 261 |
| 12... | 1515 | 159 | 58 |
| 14... | 1115 | 140 | 53 |
| 17... | 0920 | 126 | 78 |
| 27... | 0810 | 689 | 52 |
| 28... | 1405 | 135 | 54 |
| 30... | 0850 | 130 | 28 |
| 30... | 0851 | 130 | 45 |
| NOV | | | |
| 01... | 1420 | 253 | 175 |
| 05... | 1440 | 153 | 49 |
| 07... | 1335 | 158 | 49 |
| 12... | 1445 | 141 | 30 |
| 16... | 0930 | 155 | 28 |
| DEC | | | |
| 19... | 1030 | 100* | 59 |
| JAN , 1986 | | | |
| 27... | 1545 | 88* | 21 |
| MAR | | | |
| 10... | 1510 | 198 | 209 |
| 10... | 1515 | 198 | 222 |
| 15... | 0835 | 361 | 190 |
| 18... | 1335 | 949 | 1320 |
| 19... | 0815 | 2420 | 3880 |
| 19... | 1555 | 1620 | 2430 |
| 20... | 1555 | 667 | 505 |
| 21... | 1225 | 553 | 312 |
| 22... | 0925 | 491 | 250 |
| 24... | 1555 | 400 | 198 |
| 27... | 1235 | 322 | 144 |
| 31... | 1330 | 265 | 88 |
| APR | | | |
| 04... | 1320 | 261 | 66 |
| 07... | 1235 | 243 | 78 |
| APR , 1986 | | | |
| 10... | 1240 | 232 | 36 |
| 14... | 1305 | 231 | 42 |
| 17... | 1240 | 215 | 42 |
| 21... | 1630 | 204 | 28 |
| 21... | 1631 | 204 | 22 |
| 22... | 1240 | 200 | 18 |
| 25... | 0825 | 196 | 31 |
| 28... | 1025 | 197 | 48 |
| 30... | 0745 | 201 | 119 |
| MAY | | | |
| 05... | 1645 | 185 | 61 |
| 08... | 1225 | 186 | 62 |
| 11... | 1255 | 187 | 99 |
| 14... | 0810 | 215 | 177 |
| 16... | 0930 | 287 | 351 |
| 19... | 1540 | 216 | 116 |
| 23... | 1120 | 191 | 135 |
| 27... | 1030 | 201 | 136 |
| 29... | 1240 | 185 | 124 |
| JUN | | | |
| 02... | 1710 | 170 | 122 |
| 05... | 1440 | 203 | 172 |
| 09... | 1530 | 164 | 90 |
| 09... | 1531 | 164 | 93 |
| 10... | 1550 | 180 | 145 |
| 12... | 1335 | 180 | 121 |
| 16... | 0915 | 204 | 379 |
| 19... | 1110 | 165 | 116 |
| 22... | 0845 | 287 | 593 |
| 22... | 1115 | 760 | 3340 |
| 22... | 1305 | 934 | 5470 |
| 22... | 1550 | 1120 | 2560 |
| 22... | 1825 | 1080 | 1790 |
| 23... | 0725 | 365 | 690 |
| 26... | 0830 | 186 | 222 |
| 30... | 1040 | 176 | 191 |
| JUL , 1986 | | | |
| 03... | 0940 | 161 | 184 |
| 08... | 0920 | 168 | 146 |
| 10... | 1115 | 156 | 135 |
| 14... | 0900 | 148 | 118 |
| 17... | 0805 | 145 | 117 |
| 21... | 0810 | 134 | 90 |
| 24... | 0845 | 132 | 45 |
| 28... | 0935 | 141 | 63 |
| 31... | 0800 | 131 | 95 |
| AUG | | | |
| 04... | 0900 | 122 | 98 |
| 04... | 1440 | 122 | 71 |
| 04... | 1441 | 122 | 69 |
| 07... | 0930 | 140 | 91 |
| 11... | 0825 | 129 | 95 |
| 14... | 1015 | 144 | 126 |
| 18... | 1015 | 123 | 81 |
| 21... | 1100 | 119 | 75 |
| 25... | 1030 | 127 | 94 |
| 26... | 1015 | 240 | 1700 |
| 26... | 1240 | 265 | 1400 |
| 26... | 1550 | 288 | 785 |
| 28... | 0945 | 139 | 98 |
| SEP | | | |
| 02... | 1500 | 118 | 80 |
| 02... | 1550 | 118 | 80 |
| 05... | 1325 | 121 | 77 |
| 08... | 1510 | 116 | 82 |
| 11... | 0830 | 212 | 181 |
| 15... | 1450 | 132 | 79 |
| 18... | 1350 | 135 | 78 |
| 22... | 1020 | 168 | 116 |
| 22 .. | 1500 | 165 | 233 |
| 22... | 1501 | 165 | 122 |
| 25... | 0830 | 224 | 295 |
| 29... | 0945 | 185 | 142 |

*DISCHARGE, IN CUBIC FEET PER SECOND (00060).

## 05413500 GRANT RIVER AT BURTON, WI--CONTINUED

## SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 196 | 91 | 316 | 196 | 48 | 48 | 41 | 24 | 35 | 19 | 31 | 14 |
| 2 | 188 | 71 | 201 | 134 | 48 | 46 | 41 | 23 | 35 | 19 | 31 | 14 |
| 3 | 180 | 64 | 96 | 47 | 47 | 37 | 41 | 23 | 35 | 19 | 31 | 13 |
| 4 | 172 | 60 | 89 | 39 | 47 | 39 | 41 | 26 | 35 | 20 | 31 | 13 |
| 5 | 165 | 57 | 82 | 34 | 47 | 33 | 40 | 25 | 35 | 30 | 30 | 13 |
| 6 | 158 | 53 | 76 | 31 | 47 | 27 | 40 | 24 | 35 | 31 | 30 | 12 |
| 7 | 152 | 50 | 70 | 30 | 46 | 27 | 40 | 23 | 34 | 25 | 30 | 11 |
| 8 | 145 | 48 | 65 | 26 | 46 | 26 | 40 | 22 | 34 | 23 | 29 | 11 |
| 9 | 139 | 47 | 60 | 24 | 46 | 25 | 40 | 23 | 34 | 19 | 58 | 24 |
| 10 | 133 | 50 | 56 | 22 | 46 | 25 | 39 | 23 | 34 | 17 | 155 | 84 |
| 11 | 128 | 45 | 51 | 19 | 46 | 25 | 39 | 23 | 34 | 18 | 258 | 178 |
| 12 | 123 | 52 | 48 | 18 | 45 | 20 | 39 | 24 | 34 | 18 | 174 | 109 |
| 13 | 93 | 42 | 44 | 18 | 45 | 19 | 39 | 21 | 33 | 17 | 244 | 199 |
| 14 | 69 | 26 | 41 | 17 | 45 | 21 | 39 | 22 | 33 | 19 | 404 | 439 |
| 15 | 66 | 24 | 38 | 15 | 45 | 24 | 38 | 22 | 33 | 17 | 196 | 186 |
| 16 | 64 | 22 | 35 | 15 | 44 | 23 | 38 | 21 | 33 | 19 | 173 | 175 |
| 17 | 62 | 21 | 32 | 14 | 44 | 21 | 38 | 22 | 33 | 19 | 464 | 584 |
| 18 | 60 | 22 | 41 | 19 | 44 | 20 | 38 | 23 | 33 | 19 | 544 | 1340 |
| 19 | 58 | 26 | 66 | 37 | 44 | 20 | 38 | 24 | 32 | 19 | 446 | 2180 |
| 20 | 56 | 22 | 59 | 28 | 44 | 21 | 38 | 22 | 32 | 19 | 365 | 780 |
| 21 | 54 | 20 | 53 | 23 | 43 | 21 | 37 | 22 | 32 | 17 | 299 | 459 |
| 22 | 52 | 19 | 50 | 22 | 43 | 23 | 37 | 21 | 32 | 17 | 246 | 317 |
| 23 | 69 | 27 | 50 | 21 | 43 | 27 | 37 | 18 | 32 | 15 | 282 | 356 |
| 24 | 230 | 142 | 49 | 19 | 43 | 29 | 37 | 20 | 32 | 16 | 288 | 320 |
| 25 | 111 | 47 | 49 | 23 | 43 | 23 | 37 | 20 | 32 | 15 | 200 | 208 |
| 26 | 89 | 35 | 49 | 22 | 42 | 24 | 36 | 17 | 31 | 16 | 200 | 205 |
| 27 | 80 | 30 | 49 | 20 | 42 | 26 | 36 | 14 | 31 | 16 | 170 | 149 |
| 28 | 70 | 25 | 48 | 19 | 42 | 25 | 36 | 18 | 31 | 14 | 160 | 133 |
| 29 | 70 | 25 | 48 | 20 | 42 | 25 | 36 | 20 | --- | --- | 160 | 130 |
| 30 | 65 | 23 | 48 | 33 | 42 | 24 | 36 | 18 | --- | --- | 160 | 122 |
| 31 | 65 | 23 | --- | --- | 41 | 25 | 36 | 19 | --- | --- | 150 | 108 |
| TOTAL | --- | 1309 | --- | 1005 | --- | 819 | --- | 667 | --- | 532 | --- | 8886 |

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 140 | 100 | 60 | 32 | 114 | 54 | 188 | 87 | 96 | 33 | 84 | 27 |
| 2 | 140 | 95 | 60 | 30 | 111 | 51 | 186 | 84 | 97 | 33 | 81 | 26 |
| 3 | 130 | 88 | 60 | 30 | 108 | 49 | 183 | 80 | 97 | 33 | 79 | 26 |
| 4 | 130 | 92 | 60 | 30 | 105 | 48 | 175 | 75 | 84 | 28 | 78 | 28 |
| 5 | 130 | 93 | 60 | 30 | 103 | 55 | 167 | 71 | 75 | 25 | 77 | 26 |
| 6 | 120 | 82 | 60 | 30 | 100 | 48 | 159 | 66 | 83 | 33 | 78 | 25 |
| 7 | 120 | 78 | 64 | 31 | 97 | 46 | 152 | 64 | 90 | 34 | 80 | 25 |
| 8 | 90 | 57 | 63 | 32 | 94 | 44 | 146 | 65 | 92 | 34 | 81 | 25 |
| 9 | 90 | 56 | 72 | 35 | 92 | 41 | 140 | 61 | 93 | 33 | 75 | 24 |
| 10 | 80 | 50 | 84 | 40 | 137 | 68 | 135 | 58 | 94 | 34 | 126 | 65 |
| 11 | 80 | 50 | 97 | 47 | 190 | 106 | 130 | 62 | 97 | 34 | 232 | 153 |
| 12 | 75 | 47 | 100 | 51 | 128 | 63 | 126 | 57 | 106 | 35 | 215 | 111 |
| 13 | 75 | 46 | 100 | 49 | 107 | 49 | 122 | 52 | 116 | 38 | 140 | 54 |
| 14 | 75 | 47 | 170 | 102 | 130 | 62 | 118 | 47 | 123 | 49 | 107 | 38 |
| 15 | 80 | 54 | 183 | 102 | 274 | 146 | 118 | 47 | 112 | 47 | 63 | 30 |
| 16 | 70 | 43 | 302 | 218 | 188 | 100 | 117 | 47 | 100 | 36 | 79 | 27 |
| 17 | 65 | 38 | 190 | 115 | 165 | 79 | 115 | 45 | 90 | 31 | 78 | 26 |
| 18 | 65 | 37 | 272 | 195 | 145 | 65 | 108 | 41 | 82 | 27 | 79 | 29 |
| 19 | 65 | 37 | 139 | 83 | 128 | 58 | 102 | 38 | 79 | 26 | 86 | 31 |
| 20 | 60 | 34 | 120 | 67 | 113 | 49 | 95 | 35 | 77 | 25 | 95 | 36 |
| 21 | 60 | 33 | 125 | 67 | 99 | 42 | 86 | 31 | 76 | 24 | 105 | 48 |
| 22 | 60 | 33 | 130 | 68 | 1420 | 3540 | 69 | 25 | 80 | 25 | 127 | 57 |
| 23 | 60 | 32 | 134 | 69 | 704 | 698 | 55 | 20 | 84 | 27 | 108 | 42 |
| 24 | 60 | 32 | 135 | 68 | 445 | 264 | 46 | 17 | 89 | 28 | 129 | 54 |
| 25 | 60 | 32 | 135 | 68 | 307 | 163 | 49 | 20 | 83 | 28 | 268 | 164 |
| 26 | 60 | 32 | 136 | 70 | 226 | 114 | 54 | 21 | 592 | 456 | 182 | 95 |
| 27 | 60 | 32 | 135 | 73 | 213 | 104 | 58 | 21 | 306 | 199 | 119 | 53 |
| 28 | 60 | 32 | 130 | 68 | 205 | 99 | 64 | 25 | 109 | 41 | 78 | 31 |
| 29 | 60 | 32 | 124 | 62 | 198 | 92 | 74 | 28 | 94 | 33 | 188 | 117 |
| 30 | 60 | 33 | 121 | 59 | 191 | 91 | 65 | 30 | 90 | 30 | 165 | 98 |
| 31 | --- | --- | 118 | 56 | --- | --- | 94 | 33 | 87 | 29 | --- | --- |
| TOTAL | --- | 1547 | --- | 2077 | --- | 6488 | --- | 1453 | --- | 1588 | --- | 1591 |

TOTAL LOAD FOR YEAR: 27962 TONS.

## 05414000 PLATTE RIVER NEAR ROCKVILLE, WI

LOCATION.--Lat 42°43'52", long 90°38'25", in SW 1/4 sec.17, T.3 N., R.2 W., Grant County, Hydrologic Unit 07060003, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mi upstream from Blakely Branch, 2.2 mi east of Rockville, 4.5 mi northeast of Potosi, and 15.2 mi upstream from mouth.

DRAINAGE AREA.--142 mi$^2$.

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge only for October and November 1934, published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1935-36, 1937(M), 1939(M), 1941-43, 1946(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 642.50 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 mi upstream at datum 12.55 ft higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records good except for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--52 years, 101 $ft^3/s$, 9.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,500 $ft^3/s$ July 16, 1950, gage height, 17.26 ft, from rating curve extended above 7,000 $ft^3/s$ on basis of slope-area measurement of peak flow; no flow Nov. 24, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 19 | 0315 | *1,780 | *8.64 | No other peak greater than base discharge. | | | |

Minimum daily, 58 $ft^3/s$, Jan. 27, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 23-25, Nov. 30 to Mar. 9.)

| | | | |
|---|---|---|---|
| 3.6 | 50 | 6.0 | 686 |
| 4.0 | 121 | 7.0 | 1,070 |
| 5.0 | 364 | 8.0 | 1,490 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 108 | 216 | 100 | 68 | 72 | 66 | 198 | 136 | 112 | 95 | 83 | 71 |
| 2 | 92 | 213 | 82 | 68 | 72 | 68 | 186 | 129 | 107 | 95 | 81 | 70 |
| 3 | 85 | 168 | 78 | 68 | 74 | 70 | 192 | 126 | 105 | 93 | 73 | 71 |
| 4 | 83 | 145 | 90 | 68 | 82 | 72 | 194 | 125 | 106 | 91 | 72 | 75 |
| 5 | 81 | 131 | 86 | 68 | 96 | 72 | 196 | 129 | 112 | 90 | 72 | 71 |
| 6 | 77 | 126 | 84 | 68 | 92 | 70 | 183 | 128 | 109 | 89 | 88 | 67 |
| 7 | 75 | 124 | 82 | 68 | 86 | 60 | 177 | 122 | 108 | 90 | 80 | 66 |
| 8 | 76 | 114 | 80 | 68 | 74 | 72 | 169 | 121 | 106 | 93 | 82 | 65 |
| 9 | 81 | 115 | 80 | 68 | 64 | 86 | 163 | 122 | 100 | 93 | 76 | 73 |
| 10 | 91 | 113 | 78 | 70 | 62 | 141 | 161 | 118 | 114 | 91 | 79 | 136 |
| 11 | 82 | 105 | 76 | 72 | 66 | 192 | 160 | 120 | 125 | 103 | 75 | 150 |
| 12 | 132 | 106 | 70 | 72 | 70 | 174 | 160 | 123 | 111 | 96 | 72 | 109 |
| 13 | 116 | 120 | 74 | 70 | 72 | 200 | 155 | 128 | 104 | 89 | 71 | 84 |
| 14 | 100 | 121 | 74 | 68 | 72 | 238 | 171 | 152 | 109 | 84 | 93 | 81 |
| 15 | 93 | 115 | 74 | 70 | 72 | 246 | 171 | 146 | 117 | 83 | 86 | 81 |
| 16 | 87 | 127 | 74 | 76 | 72 | 271 | 158 | 174 | 113 | 86 | 76 | 78 |
| 17 | 84 | 125 | 72 | 78 | 72 | 337 | 151 | 166 | 100 | 84 | 73 | 79 |
| 18 | 90 | 153 | 70 | 76 | 72 | 776 | 148 | 177 | 97 | 81 | 70 | 76 |
| 19 | 105 | 194 | 68 | 74 | 72 | 1240 | 148 | 149 | 97 | 78 | 68 | 79 |
| 20 | 96 | 162 | 70 | 72 | 72 | 555 | 145 | 139 | 95 | 78 | 67 | 83 |
| 21 | 94 | 144 | 72 | 70 | 72 | 396 | 142 | 133 | 94 | 78 | 67 | 88 |
| 22 | 90 | 142 | 72 | 70 | 72 | 344 | 138 | 129 | 174 | 80 | 65 | 89 |
| 23 | 94 | 130 | 72 | 68 | 72 | 328 | 135 | 126 | 128 | 79 | 66 | 83 |
| 24 | 106 | 120 | 70 | 68 | 70 | 294 | 135 | 125 | 112 | 80 | 65 | 88 |
| 25 | 93 | 120 | 70 | 66 | 68 | 283 | 135 | 124 | 101 | 93 | 67 | 152 |
| 26 | 89 | 121 | 70 | 62 | 68 | 265 | 139 | 128 | 99 | 86 | 128 | 107 |
| 27 | 87 | 115 | 70 | 58 | 68 | 239 | 134 | 132 | 99 | 85 | 107 | 93 |
| 28 | 83 | 113 | 70 | 86 | 66 | 229 | 139 | 124 | 98 | 94 | 78 | 91 |
| 29 | 82 | 109 | 70 | 80 | --- | 222 | 137 | 118 | 95 | 89 | 75 | 115 |
| 30 | 82 | 110 | 70 | 74 | --- | 209 | 151 | 116 | 97 | 85 | 73 | 123 |
| 31 | 87 | --- | 70 | 72 | --- | 199 | --- | 113 | --- | 87 | 71 | --- |
| TOTAL | 2821 | 4017 | 2338 | 2184 | 2042 | 8014 | 4771 | 4098 | 3244 | 2718 | 2399 | 2694 |
| MEAN | 91.0 | 134 | 75.4 | 70.5 | 72.9 | 259 | 159 | 132 | 108 | 87.7 | 77.4 | 89.8 |
| MAX | 132 | 216 | 100 | 86 | 96 | 1240 | 198 | 177 | 174 | 103 | 128 | 152 |
| MIN | 75 | 105 | 68 | 58 | 62 | 60 | 134 | 113 | 94 | 78 | 65 | 65 |
| CFSM | .64 | .94 | .53 | .50 | .51 | 1.82 | 1.12 | .93 | .76 | .62 | .55 | .63 |
| IN. | .74 | 1.05 | .61 | .57 | .53 | 2.10 | 1.25 | 1.07 | .85 | .71 | .63 | .71 |

CAL YR 1985 TOTAL 42850 MEAN 117 MAX 1600 MIN 63 CFSM .82 IN 11.23
WTR YR 1986 TOTAL 41340 MEAN 113 MAX 1240 MIN 58 CFSM .80 IN 10.83

## 05415000 GALENA RIVER AT BUNCOMBE, WI

LOCATION.--Lat 42°30'49", long 90°22'40", in SW 1/4 sec.33, T.1 N., R.1 E., Lafayette County, Hydrologic Unit 07060005, on left bank at Buncombe, 0.6 mi upstream from Coon Branch, 1.5 mi upstream from Scrabble Branch, 2.0 mi upstream from Wisconsin-Illinois State line, and 3.5 mi southeast of Hazel Green.

DRAINAGE AREA.--125 mi$^2$.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1438: 1942(P), 1943(M), 1944(P), 1945(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 682.31 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating tables below. Records good except for ice-affected period, which is fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--47 years, 79.4 ft$^3$/s, 8.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,700 ft$^3$/s June 29, 1969, gage height, 19.57 ft from rating curve extended above 8,100 ft$^3$/s on basis of slope-area measurements at gage heights 15.68 ft and 19.57 ft; minimum discharge, 0.8 ft$^3$/s Mar. 3, 1954.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of February 1937 reached a stage of about 17.1 ft, from information by local resident, discharge, 18,000 ft$^3$/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Sept. 11 | 0800 | *3,430 | *10.36 | Sept. 24 | 2300 | 3,180 | 10.03 |

Minimum daily discharge, 51 ft$^3$/s, Oct. 7.

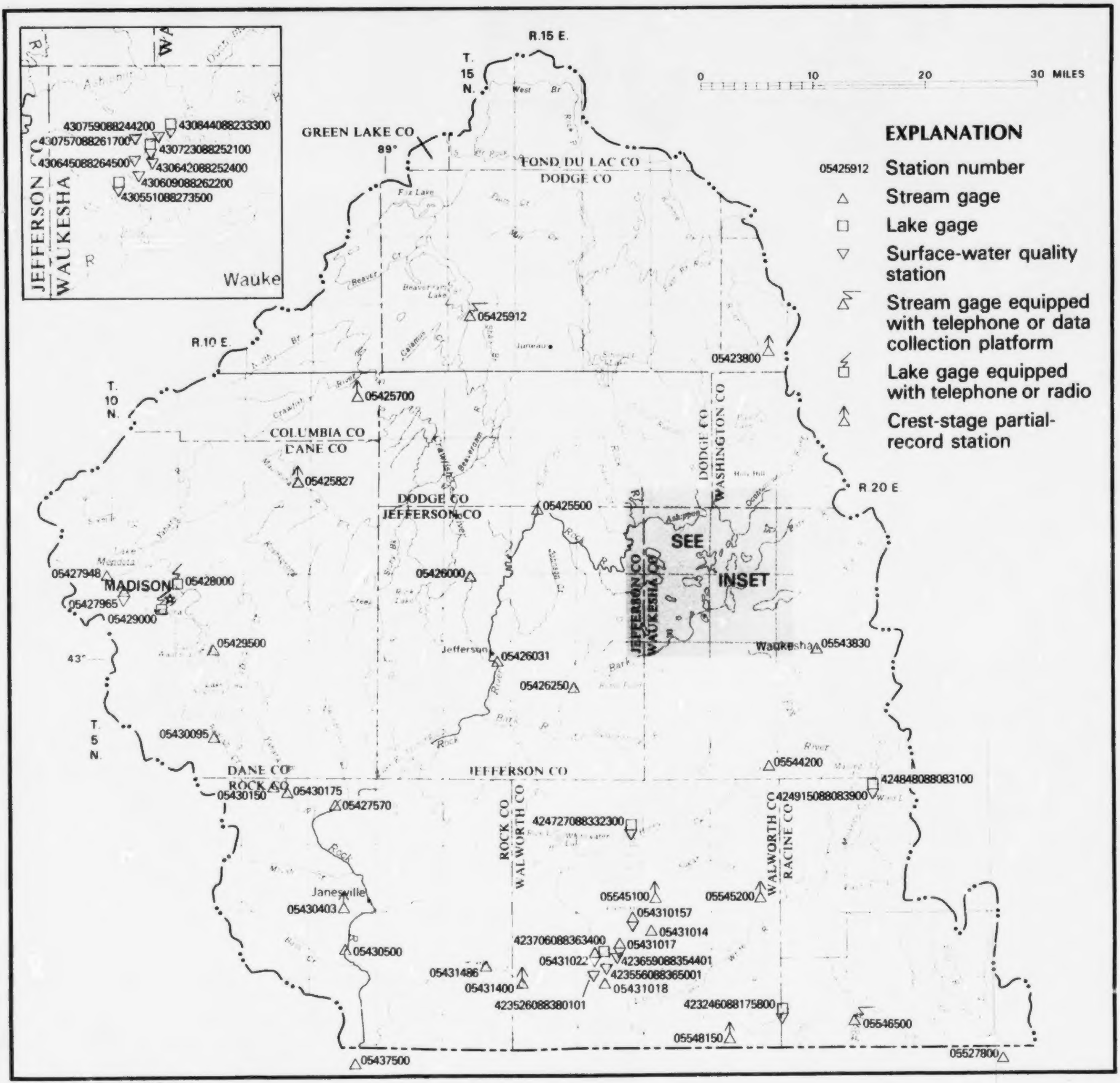
RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Mar. 9.)

| | | | |
|---|---|---|---|
| 2.8 | 50 | 5.0 | 503 |
| 3.0 | 73 | 6.0 | 848 |
| 3.5 | 148 | 7.0 | 1,280 |
| 4.0 | 246 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 65 | 276 | 130 | 72 | 72 | 66 | 162 | 109 | 114 | 104 | 72 | 72 |
| 2 | 57 | 269 | 110 | 72 | 72 | 68 | 153 | 100 | 107 | 102 | 71 | 72 |
| 3 | 54 | 167 | 100 | 72 | 74 | 70 | 167 | 97 | 105 | 97 | 69 | 74 |
| 4 | 58 | 141 | 110 | 72 | 82 | 72 | 171 | 98 | 109 | 94 | 68 | 83 |
| 5 | 55 | 126 | 120 | 72 | 110 | 72 | 169 | 101 | 230 | 92 | 71 | 75 |
| 6 | 52 | 125 | 110 | 72 | 96 | 70 | 157 | 102 | 122 | 89 | 117 | 72 |
| 7 | 51 | 129 | 110 | 72 | 86 | 68 | 150 | 96 | 116 | 94 | 93 | 71 |
| 8 | 53 | 113 | 110 | 72 | 74 | 72 | 143 | 96 | 109 | 223 | 82 | 70 |
| 9 | 86 | 134 | 100 | 72 | 64 | 90 | 136 | 93 | 102 | 151 | 77 | 104 |
| 10 | 119 | 149 | 100 | 72 | 68 | 561 | 131 | 92 | 135 | 115 | 77 | 203 |
| 11 | 86 | 123 | 94 | 74 | 70 | 386 | 131 | 95 | 142 | 119 | 73 | 1180 |
| 12 | 226 | 122 | 86 | 74 | 70 | 280 | 128 | 97 | 136 | 108 | 70 | 207 |
| 13 | 126 | 132 | 82 | 66 | 72 | 338 | 128 | 96 | 113 | 103 | 70 | 146 |
| 14 | 95 | 127 | 80 | 70 | 72 | 411 | 143 | 129 | 121 | 94 | 148 | 127 |
| 15 | 87 | 117 | 80 | 74 | 72 | 329 | 144 | 124 | 137 | 93 | 103 | 117 |
| 16 | 78 | 135 | 80 | 74 | 72 | 352 | 128 | 215 | 313 | 92 | 82 | 108 |
| 17 | 74 | 127 | 80 | 74 | 72 | 405 | 121 | 228 | 144 | 88 | 77 | 105 |
| 18 | 80 | 315 | 80 | 74 | 72 | 654 | 118 | 253 | 128 | 86 | 73 | 106 |
| 19 | 86 | 346 | 80 | 74 | 72 | 786 | 120 | 169 | 123 | 85 | 71 | 104 |
| 20 | 78 | 202 | 78 | 74 | 72 | 344 | 118 | 148 | 115 | 83 | 69 | 103 |
| 21 | 74 | 166 | 78 | 72 | 72 | 295 | 117 | 138 | 109 | 82 | 69 | 210 |
| 22 | 73 | 160 | 78 | 72 | 72 | 272 | 110 | 131 | 137 | 80 | 67 | 359 |
| 23 | 89 | 150 | 78 | 72 | 72 | 270 | 109 | 125 | 116 | 78 | 68 | 261 |
| 24 | 136 | 144 | 78 | 72 | 70 | 237 | 107 | 121 | 106 | 77 | 67 | 421 |
| 25 | 94 | 140 | 76 | 70 | 68 | 229 | 107 | 125 | 102 | 85 | 69 | 842 |
| 26 | 86 | 133 | 76 | 64 | 70 | 224 | 114 | 130 | 101 | 81 | 90 | 261 |
| 27 | 80 | 124 | 76 | 54 | 70 | 192 | 108 | 155 | 102 | 78 | 99 | 207 |
| 28 | 75 | 120 | 74 | 88 | 66 | 188 | 111 | 147 | 102 | 84 | 74 | 238 |
| 29 | 73 | 120 | 74 | 82 | --- | 180 | 107 | 131 | 98 | 78 | 72 | 498 |
| 30 | 72 | 120 | 74 | 76 | --- | 169 | 119 | 128 | 111 | 75 | 72 | 421 |
| 31 | 75 | --- | 74 | 72 | --- | 162 | --- | 119 | --- | 74 | 72 | --- |
| TOTAL | 2593 | 4752 | 2756 | 2242 | 2074 | 7912 | 3927 | 3988 | 3805 | 2984 | 2452 | 6917 |
| MEAN | 83.6 | 158 | 88.9 | 72.3 | 74.1 | 255 | 131 | 129 | 127 | 96.3 | 79.1 | 231 |
| MAX | 226 | 346 | 130 | 88 | 110 | 786 | 171 | 253 | 313 | 223 | 148 | 1180 |
| MIN | 51 | 113 | 74 | 54 | 64 | 66 | 107 | 92 | 98 | 74 | 67 | 70 |
| CFSM | .67 | 1.26 | .71 | .58 | .59 | 2.04 | 1.05 | 1.03 | 1.02 | .77 | .63 | 1.85 |
| IN. | .77 | 1.41 | .82 | .67 | .62 | 2.35 | 1.17 | 1.19 | 1.13 | .89 | .73 | 2.06 |

CAL YR 1985 TOTAL 37958 MEAN 104 MAX 2700 MIN 42 CFSM .83 IN 11.30
WTR YR 1986 TOTAL 46402 MEAN 127 MAX 1180 MIN 51 CFSM 1.02 IN 13.81



Base from U.S. Geological Survey
State base map, 1968

ROCK-FOX RIVER BASIN

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## 430844088233300 NORTH LAKE NEAR NORTH LAKE, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 43°08'44", long 88°23'33", in NE 1/4 sec.20, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, 1.4 miles southwest of North Lake.

PERIOD OF RECORD.--April 1985 to current year.

GAGE.--Staff gage read by Peter J. Mihelich. Elevation of gage is 896 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.45 ft, Sept. 15, 1986; minimum observed, 10.00 ft, July 21-23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 12.45 ft, Sept. 15; minimum observed, 10.24 ft, Oct. 2, 3.

GAGE HEIGHT (FEET ABOVE DATUM) WATER YEAR 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.28 | 11.10 | | | | --- | 11.43 | 10.74 | 10.53 | 10.73 | 10.59 | 10.59 |
| 2 | 10.24 | 11.30 | | | | --- | 11.41 | 10.74 | 10.49 | 10.69 | 10.53 | 10.53 |
| 3 | 10.24 | 11.49 | | | | --- | 11.41 | 10.74 | 10.43 | 10.63 | 10.51 | 10.47 |
| 4 | 10.26 | 11.68 | | | | --- | 11.41 | 10.71 | 10.36 | 10.59 | 10.49 | 10.41 |
| 5 | 10.40 | 11.70 | | | | --- | 11.33 | 10.71 | 10.36 | 10.57 | 10.43 | 10.39 |
| 6 | 10.38 | 11.68 | | | | --- | 11.31 | 10.69 | 10.36 | 10.53 | 10.59 | 10.39 |
| 7 | 10.38 | 11.60 | | | | --- | 11.26 | 10.69 | 10.36 | 10.47 | 10.73 | 10.37 |
| 8 | 10.41 | 11.50 | | | | --- | 11.21 | 10.66 | 10.36 | 10.53 | 10.83 | 10.33 |
| 9 | 10.50 | 11.48 | | | | --- | 11.16 | 10.66 | 10.36 | 10.53 | 10.83 | 10.33 |
| 10 | 10.54 | 11.45 | | | | --- | 11.11 | 10.64 | 10.36 | 10.49 | 10.87 | 10.53 |
| 11 | 10.58 | --- | | | | --- | 10.93 | 10.61 | 10.34 | 10.49 | 10.83 | 10.97 |
| 12 | 10.71 | 11.30 | | | | --- | --- | 10.61 | 10.31 | 10.49 | 10.81 | 11.81 |
| 13 | 10.81 | 11.31 | | | | --- | 10.91 | 10.61 | 10.29 | 10.79 | 10.79 | 12.25 |
| 14 | 10.84 | 11.34 | | | | --- | 10.96 | 10.64 | 10.31 | 10.91 | 10.75 | 12.42 |
| 15 | 10.88 | --- | | | | --- | 10.99 | 10.66 | 10.33 | 10.91 | 10.73 | 12.45 |
| 16 | 10.90 | 11.45 | | | | --- | 10.99 | 10.74 | 10.33 | 11.13 | 10.71 | 12.37 |
| 17 | 10.89 | 11.50 | | | | --- | 11.01 | 10.89 | 10.31 | 11.35 | 10.69 | 12.23 |
| 18 | 10.89 | 11.61 | | | | --- | 10.99 | 10.93 | 10.29 | 11.31 | 10.63 | 11.93 |
| 19 | 10.92 | 11.68 | | | | --- | 10.96 | 10.95 | 10.29 | 11.27 | 10.59 | 11.89 |
| 20 | 10.94 | 11.71 | | | | --- | 10.93 | 10.93 | 10.29 | 11.21 | 10.53 | 11.74 |
| 21 | 10.94 | 11.71 | | | | 12.21 | 10.91 | 10.89 | 10.27 | 11.17 | 10.49 | 11.59 |
| 22 | 10.92 | 11.66 | | | | --- | 10.87 | 10.85 | 10.29 | 11.03 | 10.41 | 11.59 |
| 23 | 10.90 | 11.58 | | | | --- | 10.81 | 10.79 | 10.29 | 10.93 | 10.39 | 11.67 |
| 24 | 11.00 | --- | | | | --- | 10.79 | 10.75 | 10.32 | 10.83 | 10.37 | 11.63 |
| 25 | 11.00 | --- | | | | --- | 10.74 | 10.75 | 10.31 | 10.81 | 10.33 | 11.77 |
| 26 | 10.98 | --- | | | | --- | 10.76 | 10.69 | 10.30 | 10.75 | 10.61 | 11.85 |
| 27 | 10.96 | --- | | | | 11.91 | 10.76 | 10.69 | 10.61 | 10.69 | 10.69 | 11.89 |
| 28 | 10.92 | --- | | | | 11.83 | 10.74 | 10.65 | 10.71 | 10.71 | 10.71 | 11.85 |
| 29 | 10.88 | --- | | | | 11.71 | 10.74 | 10.61 | 10.81 | 10.75 | 10.65 | 12.03 |
| 30 | 10.86 | --- | | | | 11.61 | 10.74 | 10.59 | 10.77 | 10.67 | 10.63 | 12.17 |
| 31 | 10.86 | --- | | | | 11.53 | --- | 10.55 | --- | 10.63 | 10.61 | --- |
| MEAN | 10.72 | --- | | | | --- | --- | 10.72 | 10.39 | 10.79 | 10.62 | 11.41 |
| MAX | 11.00 | --- | | | | --- | --- | 10.95 | 10.81 | 11.35 | 10.87 | 12.45 |
| MIN | 10.24 | --- | | | | --- | --- | 10.55 | 10.27 | 10.47 | 10.33 | 10.33 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°08'50", long 88°23'17", in NE 1/4 sec.20, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, near center of southwest lobe of lake, and 1.1 miles southwest of North Lake.

PERIOD OF RECORD.--May 1985 to current year.

REMARKS.--Secchi disc readings made by David Bykowski.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 3 | 3.5 | MAY 23 | 5.5 | JUNE 20 | 5.6 | JULY 16 | 2.9 | AUG. 7 | 2.7 | SEPT. 3 | 2.4 |
| MAY 11 | 5.3 | MAY 31 | 5.5 | JUNE 22 | 4.4 | JULY 23 | 2.7 | AUG. 13 | 2.2 | SEPT. 11 | 1.9 |
| MAY 18 | 5.9 | JUNE 7 | 7.6 | JUNE 28 | 3.8 | JULY 31 | 2.5 | AUG. 28 | 2.4 | | |

## 430723088252100 OKAUCHEE LAKE AT OKAUCHEE, WI

LOCATION.--Lat 43°07'23", long 88°25'21", in NE 1/4 NE 1/4, sec.36, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

DRAINAGE AREA.--80.7 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--February to September 1984, March 4 to September 30, 1986.

GAGE.--Staff gage at outlet read by Tom Gukich. Datum of gage, 869.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake levels controlled at dam outlet by Town of Oconomowoc. The Oconomowoc River flows through the lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 5.54 ft, Sept. 22, 1986; minimum observed, 3.87 ft, Mar. 4, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 5.54 ft, Sept. 22; minimum observed, 3.87 ft, Mar. 4.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | --- | --- | | --- | 4.76 | --- | --- |
| 2 | | | | | | --- | --- | | --- | --- | 4.76 | 4.76 |
| 3 | | | | | | --- | --- | | --- | --- | --- | --- |
| 4 | | | | | | 3.87 | --- | | --- | --- | 4.72 | --- |
| 5 | | | | | | --- | --- | | --- | --- | --- | 4.58 |
| 6 | | | | | | --- | --- | | --- | --- | 4.82 | --- |
| 7 | | | | | | --- | --- | | --- | --- | --- | --- |
| 8 | | | | | | --- | --- | | --- | 4.84 | --- | --- |
| 9 | | | | | | --- | --- | | --- | --- | --- | --- |
| 10 | | | | | | --- | --- | | --- | --- | --- | --- |
| 11 | | | | | | --- | --- | | --- | 4.76 | --- | --- |
| 12 | | | | | | --- | --- | | --- | --- | --- | --- |
| 13 | | | | | | --- | --- | | --- | --- | 4.74 | --- |
| 14 | | | | | | --- | --- | | --- | 4.70 | --- | --- |
| 15 | | | | | | --- | --- | | --- | 4.74 | --- | 5.16 |
| 16 | | | | | | --- | --- | | --- | --- | --- | --- |
| 17 | | | | | | 4.54 | --- | | --- | 4.94 | --- | 5.30 |
| 18 | | | | | | 4.66 | --- | | --- | 4.96 | 4.64 | --- |
| 19 | | | | | | --- | --- | | 4.60 | 4.96 | 4.63 | --- |
| 20 | | | | | | 4.88 | --- | | --- | --- | 4.66 | --- |
| 21 | | | | | | 4.96 | --- | | --- | 4.90 | --- | --- |
| 22 | | | | | | --- | --- | | --- | --- | --- | 5.54 |
| 23 | | | | | | --- | --- | | --- | --- | 4.66 | 5.38 |
| 24 | | | | | | --- | 4.82 | | --- | --- | --- | 5.34 |
| 25 | | | | | | --- | --- | | --- | 4.72 | 4.68 | --- |
| 26 | | | | | | --- | --- | | --- | --- | 4.92 | --- |
| 27 | | | | | | 4.88 | --- | | --- | --- | --- | --- |
| 28 | | | | | | --- | --- | | --- | 4.68 | --- | 5.34 |
| 29 | | | | | | --- | --- | | --- | --- | --- | --- |
| 30 | | | | | | --- | --- | | --- | --- | --- | 5.44 |
| 31 | | | | | | 4.66 | --- | | --- | --- | --- | --- |

## 430723088252100 OKAUCHEE LAKE NO. 1 AT OKAUCHEE, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 15, 1984, to current year.

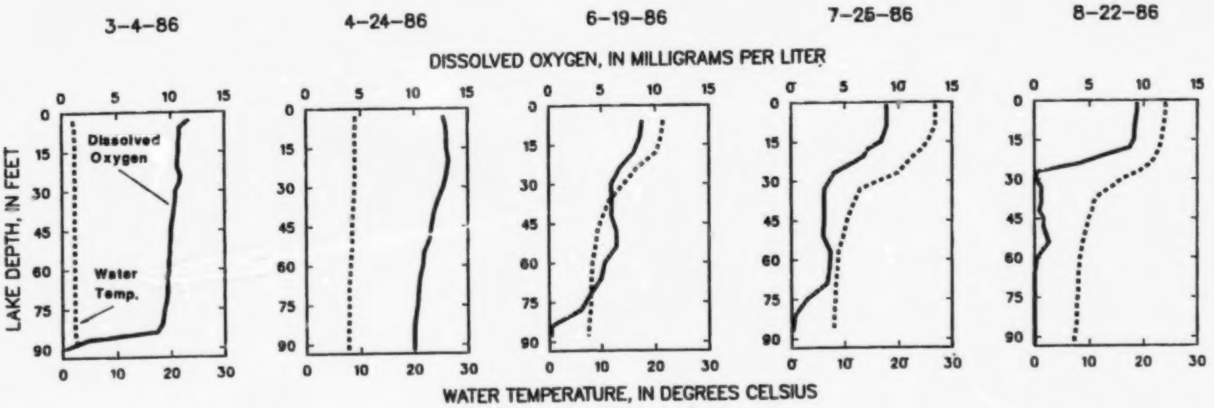
REMARKS.--A detailed water quality management plan has been developed for Okauchee Lake by Southeastern Wisconsin Regional Planning Commission; previous water-quality data are available in this report.

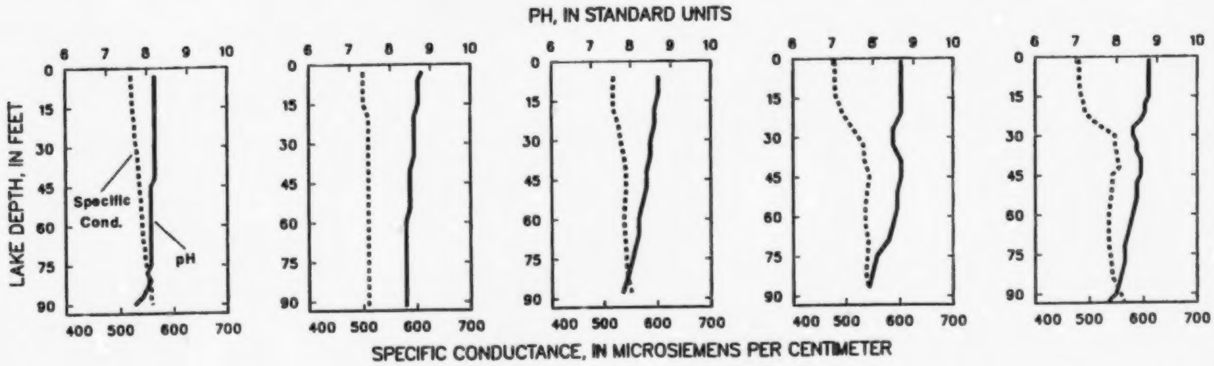
Lake sampled near center at a depth of 93 feet.

WATER-QUALITY DATA, MARCH 4 TO AUGUST 22, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 4 | | Apr. 24 | | June 19 | | July 25 | | Aug. 22 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 90.0 | 3.0 | 91.5 | 3.0 | 88.0 | 3.0 | 87.5 | 3.0 | 92.0 |
| Specific conductance (uS) | 521 | 561 | 500 | 510 | 519 | 552 | 480 | 542 | 481 | 560 |
| pH | 8.2 | 7.7 | 8.8 | 8.4 | 8.7 | 7.8 | 8.7 | 7.9 | 8.8 | 7.8 |
| Water temperature (°C) | 2.0 | 3.0 | 9.0 | 8.0 | 22.0 | 7.5 | 27.0 | 8.0 | 24.0 | 7.5 |
| Color (Pt-Co. scale) | -- | -- | 12 | 10 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 1.0 | 1.3 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- | -- | -- 2.0 -- | | -- 2.7 | -- | -- 1.2 | -- | -- 1.7 | -- |
| Dissolved oxygen | 11.7 | 0.3 | 12.7 | 10.0 | 8.8 | 0.2 | 8.9 | 0.1 | 9.4 | 0.0 |
| Hardness, as $CaCO_3$ | -- | -- | 280 | 280 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 56 | 56 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 33 | 33 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 8.6 | 8.5 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 2.0 | 2.0 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 231 | 230 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 22 | 23 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 18 | 19 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 4.6 | 5.3 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180°C | -- | -- | 290 | 300 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .59 | .59 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | <.01 | .01 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .03 | .08 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .57 | .52 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.2 | 1.2 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .015 | .013 | .010 | .021 | <.005 | .035 | .009 | .098 |
| Phosphorus, ortho, diss (as P) | -- | -- | .003 | .002 | -- | .006 | -- | .021 | -- | .094 |
| Iron, dissolved (Fe) ug/L | -- | -- | 9 | 7 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 1 | 1 | -- | -- | -- | -- | -- | -- |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 12[1] | -- | 7 | -- | 8 | -- | 5 | -- |

[1] Adjusted from 8.0 ug/L by the Wisconsin State Laboratory of Hygiene.





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## 430759088244200 OKAUCHEE LAKE NEAR OKAUCHEE, WI

LOCATION.--Lat 43°07'59", long 88°24'42", in NE 1/4 NW 1/4 sec.30, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, near Okauchee.

PERIOD OF RECORD.--April to August 1986.

REMARKS.--Sampling site is located in Crane's Nest Bay, in the northeast part of the lake, at a depth of 10 ft.

WATER-QUALITY DATA, APRIL 24 TO AUGUST 22, 1986
(Milligrams per liter unless otherwise indicated)

| | Apr. 24 | July 25 | Aug. 22 |
|---|---|---|---|
| Depth of sample (ft) | 3.0 | 3.0 | 3.0 |
| Specific conductance (uS/cm) | 510 | --- | 485 |
| pH (units) | 9.2 | 8.6 | 8.8 |
| Water temperature (°C) | 11.0 | 27.0 | 23.5 |
| Secchi-disc (meters) | 1.9 | 1.5 | 1.8 |
| Dissolved oxygen | 13.5 | 9.4 | 9.8 |
| Total phosphorus (as P) | 0.098 | 0.016 | 0.013 |
| Chlorophyll *a*, phyto. (ug/L) | --- | 8.0 | 5.0 |

## 430645088264500 OKAUCHEE LAKE, NO. 2, AT OKAUCHEE, WI

LOCATION.--Lat 43°06'45", long 88°26'45", in NE 1/4 NE 1/4 sec.35, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--April to August 1986.

REMARKS.--Sampling site is located in Lower Okauchee Lake, at a depth of 10 ft.

WATER-QUALITY DATA, APRIL 24 TO AUGUST 22, 1986
(Milligrams per liter unless otherwise indicated)

| | Apr. 24 | June 19 | July 25 | Aug. 22 |
|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 3.0 | 3.0 | 3.0 |
| Specific conductance (uS/cm) | 420 | 510 | --- | 452 |
| pH (units) | 9.1 | 8.7 | 8.7 | 8.9 |
| Water temperature (°C) | --- | 22.8 | 27.8 | 24.2 |
| Secchi-disc (meters) | 1.9 | 2.5 | 1.2 | 1.8 |
| Dissolved oxygen | 13.7 | --- | --- | 9.9 |
| Total phosphorus (as P) | 0.013 | 0.010 | 0.011 | 0.010 |
| Chlorophyll *a*, phyto. (ug/L) | --- | 5.0 | 8.0 | 4.0 |

## 430642088252400 OKAUCHEE LAKE, NO. 3, AT OKAUCHEE, WI

LOCATION.--Lat 43°06'42", long 88°25'24", in NE 1/4 NE 1/4 sec.36, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--April to August 1986.

REMARKS.--Sampling site is located in Ice House Bay, in the south bay of Okauchee Lake, at a depth of 10 ft.

WATER-QUALITY DATA, APRIL 24 TO AUGUST 22, 1986
(Milligrams per liter unless otherwise indicated)

| | Apr. 24 | June 19 | July 25 | Aug. 22 |
|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 3.0 | 3.0 | 3.0 |
| Specific conductance (uS/cm) | 490 | 507 | --- | 469 |
| pH (units) | 8.8 | 8.6 | 8.7 | 8.8 |
| Water temperature (°C) | --- | 22.9 | 27.0 | 24.5 |
| Secchi-disc (meters) | 2.0 | 2.0 | 1.2 | 1.2 |
| Dissolved oxygen | 13.2 | --- | --- | 10.3 |
| Total phosphorus (as P) | 0.009 | 0.013 | 0.007 | 0.010 |
| Chlorophyll *a*, phyto. (ug/L) | --- | 5.0 | 10.0 | 8.0 |

## 430757088261700 OKAUCHEE LAKE, NO. 4, AT OKAUCHEE, WI

LOCATION.--Lat 43°07'57", long 88°26'17", in NW 1/4 NW 1/4 sec.25, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--June 1986.

REMARKS.--Sampling site is located near Crazyman's Island, in the northwest bay of Okauchee Lake, at a depth of 10 ft.

WATER-QUALITY DATA, JUNE 19, 1986
(Milligrams per liter unless otherwise indicated)

| | June 19 |
|---|---|
| Depth of sample (ft) | 3.0 |
| Specific conductance (uS/cm) | 506 |
| pH (units) | 8.8 |
| Water temperature (°C) | 21.9 |
| Secchi-disc (meters) | 2.0 |
| Total phosphorus (as P) | 0.098 |
| Chlorophyll *a*, phyto. (ug/L) | 4.0 |

## 430551088273500 OCONOMOWOC LAKE NO. 1 (CENTER) AT OCONOMOWOC, WI

LOCATION.--Lat 43°05'51", long 88°27'35", in NW 1/4 SE 1/4 sec.2, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--April 26 to September 28, 1986.

GAGE.--Staff gage at outlet read by Martha Ibach.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 9.10 ft, Sept. 28; minimum observed, 7.69 ft, Apr. 26.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | --- | --- | --- | --- | --- | --- |
| 2 | | | | | | | --- | --- | 8.10 | --- | --- | --- |
| 3 | | | | | | | --- | --- | --- | --- | 8.06 | --- |
| 4 | | | | | | | --- | 7.75 | --- | --- | --- | --- |
| 5 | | | | | | | --- | --- | --- | --- | --- | --- |
| 6 | | | | | | | --- | --- | --- | --- | --- | --- |
| 7 | | | | | | | --- | --- | --- | 7.98 | --- | 8.12 |
| 8 | | | | | | | --- | --- | --- | --- | --- | --- |
| 9 | | | | | | | --- | --- | 8.00 | --- | --- | --- |
| 10 | | | | | | | --- | --- | --- | --- | 8.25 | --- |
| 11 | | | | | | | --- | --- | --- | --- | --- | --- |
| 12 | | | | | | | --- | 8.10 | --- | --- | --- | --- |
| 13 | | | | | | | --- | --- | --- | 8.18 | --- | --- |
| 14 | | | | | | | --- | --- | --- | --- | --- | 8.46 |
| 15 | | | | | | | --- | --- | --- | --- | --- | --- |
| 16 | | | | | | | --- | --- | 8.15 | --- | --- | --- |
| 17 | | | | | | | --- | --- | --- | --- | 8.08 | --- |
| 18 | | | | | | | --- | --- | --- | --- | --- | --- |
| 19 | | | | | | | --- | 8.10 | 7.95 | 8.08 | --- | --- |
| 20 | | | | | | | --- | --- | --- | --- | 8.10 | 8.84 |
| 21 | | | | | | | --- | --- | 7.86 | --- | --- | --- |
| 22 | | | | | | | --- | --- | --- | --- | 8.06 | --- |
| 23 | | | | | | | --- | --- | --- | --- | --- | --- |
| 24 | | | | | | | --- | --- | --- | --- | --- | --- |
| 25 | | | | | | | --- | --- | --- | --- | --- | --- |
| 26 | | | | | | | 7.69 | 8.00 | --- | --- | --- | --- |
| 27 | | | | | | | --- | --- | 8.26 | 8.12 | --- | --- |
| 28 | | | | | | | --- | --- | --- | --- | --- | 9.10 |
| 29 | | | | | | | --- | --- | --- | --- | --- | --- |
| 30 | | | | | | | --- | --- | --- | --- | 8.20 | --- |
| 31 | | | | | | | --- | --- | --- | --- | --- | --- |

## 430551088273500 OCONOMOWOC LAKE NO. 1 (CENTER) AT OCONOMOWOC, WI--CONTINUED

### WATER-QUALITY RECORDS

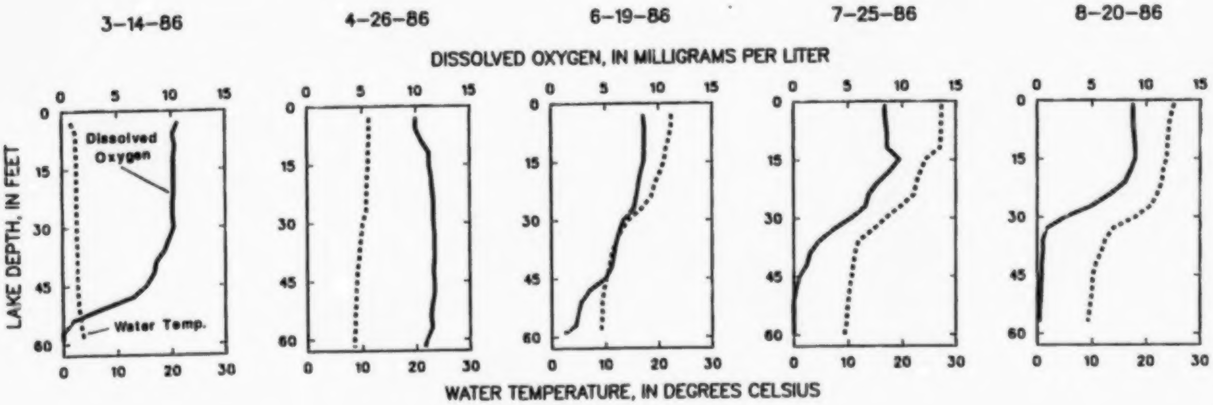
PERIOD OF RECORD.--March 14 to August 20, 1986.

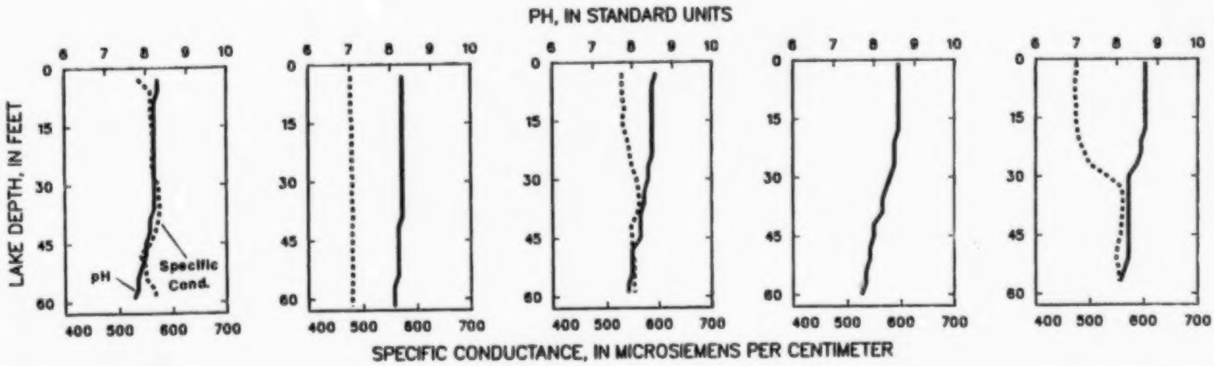
REMARKS.--Lake sampled near center at a depth of 60 ft.

WATER-QUALITY DATA, MARCH 14 TO AUGUST 20, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 14 | | Apr. 26 | | June 19 | | July 25 | | Aug. 20 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 59.0 | 3.0 | 61.5 | 3.0 | 59.0 | 3.0 | 59.5 | 3.0 | 58.0 |
| Specific conductance (uS) | 536 | 567 | 478 | 481 | 531 | 555 | -- | -- | 475 | 555 |
| pH | 8.3 | 7.7 | 8.3 | 8.2 | 8.6 | 7.9 | 8.6 | 7.7 | 8.7 | 8.1 |
| Water temperature (°C) | 1.5 | 4.0 | 11.5 | 8.5 | 22.5 | 9.0 | 27.5 | 9.5 | 24.5 | 9.5 |
| Color (Pt-Co. scale) | -- | -- | 5 | 10 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 1.0 | 1.0 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- | -- | -- 8.3 -- | | -- 4.1 -- | | -- 1.5 -- | | -- 2.2 -- | |
| Dissolved oxygen | 10.6 | 0.0 | 10.0 | 10.8 | 8.6 | 1.2 | 8.4 | 0.0 | 8.8 | 0.2 |
| Hardness, as $CaCO_3$ | -- | -- | 260 | 260 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 51 | 51 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 31 | 31 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 9.2 | 9.3 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 2.0 | 2.0 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 225 | 225 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 25 | 23 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 19 | 20 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 4.9 | 5.3 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180°C | -- | -- | 294 | 290 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .49 | .49 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | .010 | .010 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .060 | .040 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .44 | .46 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.0 | 1.0 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .003 | .005 | .006 | .011 | <.005 | .049 | .006 | .013 |
| Phosphorus, ortho, diss (as P) | -- | -- | <.001 | .003 | -- | .005 | -- | .044 | -- | .003 |
| Iron, dissolved (Fe) ug/L | -- | -- | 12 | 23 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 2 | 2 | -- | -- | -- | -- | -- | -- |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 2.5[1/] | -- | <5.0 | -- | 5.0 | -- | 6.0 | -- |

[1/] Adjusted from <5 ug/L by the Wisconsin State Laboratory of Hygiene.





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## 430609088262200 OCONOMOWOC LAKE NO. 2 (OFF HEWITT POINT) AT OCONOMOWOC, WI

### WATER-QUALITY RECORDS

LOCATION.--Lat 43°06'09", long 88°26'22", in NW 1/4 NW 1/4 sec.1, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

PERIOD OF RECORD.--March 14 to August 20, 1986.

REMARKS.--Sampling site is located in northeast bay near Hewitt Point at a depth of 48 ft.

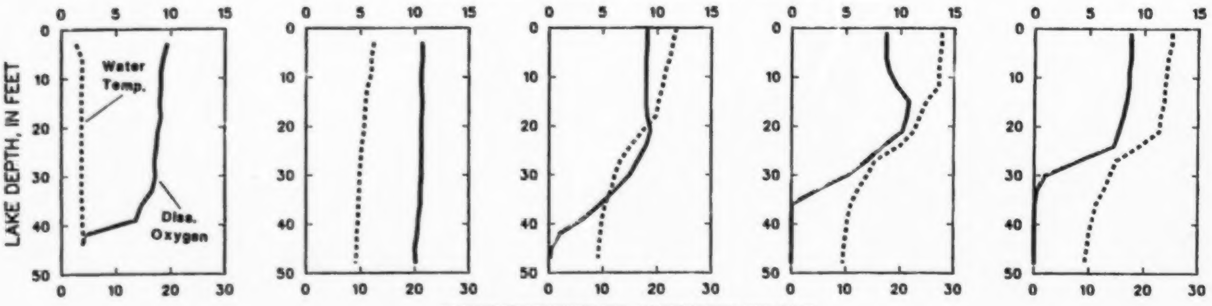
WATER-QUALITY DATA, MARCH 14 TO AUGUST 20, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 14 | | Apr. 26 | | June 19 | | July 25 | | Aug. 20 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 44.0 | 3.0 | 47.5 | 1.0 | 47.0 | 3.0 | 48.5 | 3.0 | 48.0 |
| Specific conductance (uS) | 604 | 628 | 507 | 500 | 550 | 571 | -- | -- | 493 | 600 |
| pH | 7.9 | 7.6 | 8.4 | 8.2 | 8.7 | 7.9 | 8.6 | 8.1 | 8.7 | 8.0 |
| Water temperature (°C) | 2.5 | 4.0 | 12.5 | 9.0 | 23.5 | 9.0 | 27.5 | 9.5 | 25.0 | 9.5 |
| Secchi-disc (meters) | -- | -- | -- 7.5 -- | | -- 3.0 -- | | -- 2.2 -- | | -- 2.4 -- | |
| Dissolved oxygen | 9.7 | 1.9 | 10.7 | 10.1 | 9.1 | 0.1 | 8.7 | 0.0 | 8.8 | 0.0 |
| Total phosphorus (as P) | -- | -- | <.001 | <.001 | .005 | .011 | .008 | .025 | .005 | .016 |
| Phosphorus, ortho, diss (as P) | -- | -- | -- | -- | -- | .003 | -- | .009 | -- | .005 |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 1.6[1/] | -- | <5.0 | -- | <5.0 | -- | 2.0 | -- |

[1/] Adjusted from 1.0 ug/L by the Wisconsin State Laboratory of Hygiene.

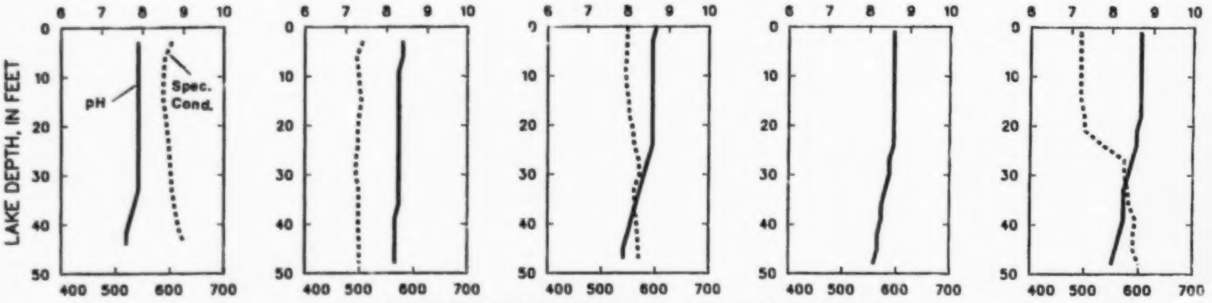
3-14-86 4-26-86 6-19-86 7-25-86 8-20-86

DISSOLVED OXYGEN, IN MILLIGRAMS PER LITER



WATER TEMPERATURE, IN DEGREES CELSIUS

PH, IN STANDARD UNITS



SPECIFIC CONDUCTANCE, IN MICROSIEMENS PER CENTIMETER

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## 05425500 ROCK RIVER AT WATERTOWN, WI

LOCATION.--Lat 43°11'17", long 88°43'34", in SW 1/4 sec.4, T.8 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank, 700 ft downstream from Milwaukee Street bridge, 1.1 mi downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi$^2$.

PERIOD OF RECORD.--June 1931 to September 1970, October 1976 to current year.

REVISED RECORDS.--WSP 1438: 1933,1935(M), 1937(M), 1938-39, 1945(M); WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 792.58 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 8-11, Mar. 24, Mar. 31 to Apr. 17, Aug. 1-12, and ice periods listed in rating table below. Records good except for estimated daily discharges, which are fair. Some regulation caused by manipulation of gates at dams on Horicon Marsh, Lake Sinissippi, and other dams in the basin.

AVERAGE DISCHARGE.--49 years, (water years 1932-70, 1977-86), 471 ft$^3$/s, 6.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft$^3$/s Mar. 31, 1979, gage height, 6.19 ft; maximum gage height, 6.32 ft Apr. 4, 1959; minimum daily discharge, 0.9 ft$^3$/s Oct. 15, 1939, Sept. 9, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 25 | 1615 | 2,600 | 4.52 | July 13 | 2015 | 1,460 | 3.52 |
| Mar. 24 | ---- | *4,030 | A *5.54 | Sept. 30 | 1800 | R 3,450 | 5.15 |

A High-water mark in well.
R On rising stage, peak occurred Oct. 5, 1986, at 0225, 3,990 ft$^3$/s, gage height, 5.51 ft.

Minimum daily discharge, 181 ft$^3$/s, Aug. 25.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 14 to Mar. 1 and Mar. 6-8.)

| | | | |
|---|---|---|---|
| 1.2 | 78 | 3.0 | 977 |
| 1.5 | 146 | 4.0 | 1,970 |
| 2.0 | 311 | 5.0 | 3,240 |
| 2.5 | 594 | 6.0 | 4,770 |

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 439 | 1290 | 2230 | 520 | 450 | 640 | 3100 | 1400 | 290 | 865 | 500 | 320 |
| 2 | 435 | 1710 | 1910 | 500 | 460 | 615 | 3100 | 1320 | 271 | 828 | 500 | 267 |
| 3 | 430 | 1710 | 1780 | 500 | 460 | 619 | 3000 | 1280 | 253 | 737 | 470 | 247 |
| 4 | 456 | 1620 | 1990 | 490 | 470 | 614 | 3000 | 1240 | 196 | 630 | 450 | 237 |
| 5 | 463 | 1580 | 2060 | 480 | 480 | 622 | 2900 | 1210 | 188 | 555 | 440 | 234 |
| 6 | 484 | 1620 | 1840 | 480 | 500 | 620 | 2900 | 1190 | 196 | 489 | 460 | 232 |
| 7 | 505 | 1680 | 1820 | 480 | 520 | 620 | 2800 | 1120 | 214 | 448 | 490 | 213 |
| 8 | 533 | 1740 | 1700 | 480 | 540 | 620 | 2800 | 1060 | 227 | 489 | 500 | 193 |
| 9 | 557 | 1820 | 1500 | 480 | 560 | 641 | 2700 | 1040 | 224 | 415 | 490 | 187 |
| 10 | 601 | 1880 | 1400 | 470 | 600 | 1060 | 2600 | 979 | 228 | 352 | 480 | 246 |
| 11 | 623 | 1910 | 1300 | 460 | 640 | 1650 | 2500 | 945 | 294 | 401 | 480 | 1370 |
| 12 | 745 | 1950 | 1220 | 460 | 700 | 1720 | 2400 | 847 | 355 | 616 | 480 | 1970 |
| 13 | 829 | 2060 | 1160 | 460 | 720 | 1760 | 2300 | 812 | 401 | 1260 | 479 | 1790 |
| 14 | 820 | 2150 | 1100 | 470 | 720 | 1980 | 2300 | 812 | 446 | 1350 | 469 | 1690 |
| 15 | 811 | 2160 | 1100 | 470 | 720 | 1970 | 2200 | 784 | 494 | 1260 | 421 | 1760 |
| 16 | 811 | 2210 | 1000 | 460 | 740 | 2000 | 2100 | 734 | 526 | 1330 | 385 | 1810 |
| 17 | 829 | 2240 | 960 | 460 | 740 | 2230 | 2100 | 686 | 546 | 1320 | 361 | 1860 |
| 18 | 845 | 2360 | 900 | 450 | 740 | 2590 | 2020 | 709 | 520 | 1230 | 332 | 1890 |
| 19 | 882 | 2490 | 840 | 450 | 740 | 2950 | 1920 | 755 | 423 | 1170 | 335 | 1920 |
| 20 | 910 | 2430 | 800 | 460 | 740 | 2600 | 1860 | 794 | 341 | 1140 | 190 | 1920 |
| 21 | 889 | 2390 | 780 | 490 | 720 | 2880 | 1800 | 832 | 300 | 1070 | 278 | 1950 |
| 22 | 917 | 2370 | 740 | 500 | 720 | 3040 | 1740 | 842 | 329 | 984 | 189 | 2290 |
| 23 | 949 | 2370 | 700 | 500 | 700 | 3310 | 1660 | 818 | 334 | 821 | 217 | 2650 |
| 24 | 988 | 2220 | 680 | 490 | 700 | 3700 | 1620 | 819 | 353 | 606 | 205 | 2380 |
| 25 | 1020 | 2330 | 640 | 490 | 680 | 3450 | 1600 | 832 | 371 | 518 | 181 | 2600 |
| 26 | 1020 | 2340 | 620 | 490 | 660 | 3360 | 1640 | 782 | 400 | 480 | 243 | 2660 |
| 27 | 1040 | 2210 | 600 | 490 | 660 | 3330 | 1630 | 784 | 831 | 474 | 356 | 2610 |
| 28 | 1030 | 2230 | 580 | 480 | 640 | 3270 | 1580 | 619 | 978 | 581 | 422 | 2680 |
| 29 | 1030 | 1830 | 560 | 470 | --- | 3250 | 1530 | 519 | 950 | 558 | 479 | 3040 |
| 30 | 1020 | 2110 | 540 | 460 | --- | 3230 | 1520 | 395 | 906 | 529 | 485 | 3340 |
| 31 | 1040 | --- | 540 | 450 | --- | 3200 | --- | 351 | --- | 534 | 403 | --- |
| TOTAL | 23951 | 61010 | 35590 | 14790 | 17720 | 64141 | 66920 | 27310 | 12385 | 24040 | 12170 | 46556 |
| MEAN | 773 | 2034 | 1148 | 477 | 633 | 2069 | 2231 | 881 | 413 | 775 | 393 | 1552 |
| MAX | 1040 | 2490 | 2230 | 520 | 740 | 3700 | 3100 | 1400 | 978 | 1350 | 500 | 3340 |
| MIN | 430 | 1290 | 540 | 450 | 450 | 614 | 1520 | 351 | 188 | 352 | 181 | 187 |
| CFSM | .80 | 2.10 | 1.19 | .49 | .65 | 2.14 | 2.30 | .91 | .43 | .80 | .41 | 1.60 |
| IN. | .92 | 2.34 | 1.37 | .57 | .68 | 2.46 | 2.57 | 1.05 | .48 | .92 | .47 | 1.79 |

CAL YR 1985 TOTAL 338833.4 MEAN 928 MAX 3050 MIN 3.4 CFSM .96 IN 13.01
WTR YR 1986 TOTAL 406583.0 MEAN 1114 MAX 3700 MIN 181 CFSM 1.15 IN 15.61

## 05425912 BEAVERDAM RIVER AT BEAVER DAM, WI

LOCATION.--Lat 43°26'57", long 88°50'21", in NE 1/4 SW 1/4 sec.4, T.11 N., R.14 E., Dodge County, Hydrologic Unit 07090002, on left bank 5 ft upstream from bridge on Davis Street, 0.8 mi downstream from outlet of Beaverdam Lake, at Beaver Dam.

DRAINAGE AREA.--157 mi$^2$.

PERIOD OF RECORD.--March 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 839.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None. Records are good. Flow regulated by dam 0.8 mi upstream.

EXTREMES FOR CURRENT PERIOD.--March to September 1985: Maximum discharge, 494 ft$^3$/s Sept. 9, gage height, 8.46 ft; minimum daily, 1.9 ft$^3$/s June 24.

Water Year 1986: Maximum discharge, 754 ft$^3$/s Sept. 26, gage height, 9.35 ft; minimum daily, 14 ft$^3$/s June 2, 3, and 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 5.3 | 1.1 | 6.0 | 40 |
| 5.4 | 2.5 | 6.5 | 98 |
| 5.5 | 5.2 | 7.0 | 175 |
| 5.6 | 9.6 | 8.0 | 380 |
| 5.8 | 23 | 9.0 | 644 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | 8.1 | 343 | 15 | 3.4 | 5.8 | 15 | 70 |
| 2 | | | | | | 8.6 | 290 | 15 | 3.7 | 6.9 | 15 | 65 |
| 3 | | | | | | 11 | 315 | 12 | 3.2 | 6.1 | 16 | 128 |
| 4 | | | | | | 75 | 321 | 11 | 3.0 | 15 | 16 | 192 |
| 5 | | | | | | 30 | 357 | 16 | 3.7 | 27 | 16 | 203 |
| 6 | | | | | | 5.1 | 369 | 20 | 5.8 | 22 | 18 | 191 |
| 7 | | | | | | 35 | 365 | 14 | 7.8 | 21 | 21 | 185 |
| 8 | | | | | | 130 | 371 | 13 | 7.7 | 21 | 17 | 188 |
| 9 | | | | | | 233 | 337 | 17 | 11 | 19 | 16 | 200 |
| 10 | | | | | | 244 | 324 | 16 | 8.0 | 19 | 16 | 193 |
| 11 | | | | | | 292 | 326 | 12 | 7.6 | 18 | 14 | 186 |
| 12 | | | | | | 323 | 317 | 19 | 9.6 | 18 | 19 | 191 |
| 13 | | | | | | 378 | 308 | 16 | 6.4 | 17 | 13 | 196 |
| 14 | | | | | | 312 | 307 | 19 | 3.9 | 17 | 12 | 196 |
| 15 | | | | | | 260 | 304 | 17 | 5.4 | 16 | 13 | 190 |
| 16 | | | | | | 395 | 303 | 15 | 3.5 | 14 | 14 | 184 |
| 17 | | | | | | 388 | 266 | 11 | 3.9 | 14 | 16 | 175 |
| 18 | | | | | | 375 | 276 | 6.1 | 3.0 | 14 | 19 | 158 |
| 19 | | | | | | 372 | 267 | 7.7 | 2.0 | 14 | 16 | 158 |
| 20 | | | | | | 321 | 253 | 6.5 | 2.1 | 15 | 16 | 163 |
| 21 | | | | | | 242 | 244 | 5.7 | 4.8 | 14 | 16 | 156 |
| 22 | | | | | | 238 | 184 | 5.5 | 5.3 | 12 | 15 | 156 |
| 23 | | | | | | 240 | 166 | 5.8 | 2.0 | 13 | 16 | 161 |
| 24 | | | | | | 251 | 144 | 5.1 | 1.9 | 15 | 18 | 156 |
| 25 | | | | | | 240 | 127 | 5.1 | 2.1 | 34 | 22 | 169 |
| 26 | | | | | | 224 | 75 | 49 | 3.9 | 14 | 30 | 199 |
| 27 | | | | | | 248 | 46 | 5.7 | 5.8 | 15 | 65 | 197 |
| 28 | | | | | | 285 | 51 | 5.3 | 5.7 | 17 | 75 | 195 |
| 29 | | | | | | 304 | 26 | 4.7 | 4.9 | 16 | 73 | 194 |
| 30 | | | | | | 293 | 14 | 6.5 | 4.8 | 14 | 76 | 192 |
| 31 | | | | | | 298 | --- | 7.2 | --- | 15 | 68 | --- |
| TOTAL | | | | | | 7058.8 | 7396 | 383.9 | 145.9 | 498.8 | 792 | 5187 |
| MEAN | | | | | | 228 | 247 | 12.4 | 4.86 | 16.1 | 25.5 | 173 |
| MAX | | | | | | 395 | 371 | 49 | 11 | 34 | 76 | 203 |
| MIN | | | | | | 5.1 | 14 | 4.7 | 1.9 | 5.8 | 12 | 65 |

05425912 BEAVERDAM RIVER AT BEAVER DAM, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 188 | 235 | 389 | 206 | 266 | 140 | 306 | 156 | 20 | 111 | 200 | 232 |
| 2 | 190 | 257 | 385 | 205 | 249 | 138 | 308 | 135 | 14 | 123 | 236 | 240 |
| 3 | 193 | 256 | 371 | 206 | 237 | 135 | 357 | 121 | 14 | 140 | 221 | 256 |
| 4 | 203 | 265 | 362 | 201 | 244 | 133 | 423 | 114 | 16 | 143 | 203 | 261 |
| 5 | 211 | 261 | 357 | 194 | 198 | 129 | 432 | 88 | 17 | 135 | 191 | 245 |
| 6 | 195 | 270 | 350 | 200 | 241 | 127 | 443 | 75 | 15 | 142 | 219 | 227 |
| 7 | 191 | 279 | 341 | 217 | 232 | 129 | 448 | 75 | 17 | 130 | 237 | 209 |
| 8 | 193 | 281 | 334 | 269 | 223 | 122 | 465 | 71 | 17 | 123 | 234 | 196 |
| 9 | 200 | 298 | 329 | 300 | 215 | 122 | 440 | 47 | 14 | 118 | 214 | 181 |
| 10 | 198 | 311 | 326 | 312 | 205 | 90 | 416 | 36 | 19 | 109 | 223 | 207 |
| 11 | 191 | 297 | 317 | 304 | 198 | 77 | 400 | 38 | 22 | 107 | 230 | 253 |
| 12 | 205 | 302 | 310 | 293 | 190 | 63 | 378 | 34 | 31 | 119 | 246 | 252 |
| 13 | 200 | 331 | 303 | 297 | 182 | 25 | 368 | 27 | 24 | 134 | 219 | 244 |
| 14 | 199 | 384 | 296 | 317 | 177 | 25 | 343 | 31 | 22 | 120 | 207 | 237 |
| 15 | 200 | 378 | 291 | 297 | 169 | 25 | 388 | 33 | 23 | 155 | 241 | 251 |
| 16 | 196 | 397 | 284 | 305 | 166 | 26 | 388 | 39 | 29 | 190 | 253 | 242 |
| 17 | 198 | 406 | 278 | 315 | 162 | 26 | 362 | 47 | 22 | 189 | 244 | 233 |
| 18 | 209 | 418 | 271 | 300 | 80 | 28 | 332 | 49 | 20 | 186 | 246 | 248 |
| 19 | 208 | 437 | 266 | 285 | 106 | 30 | 340 | 47 | 23 | 187 | 262 | 245 |
| 20 | 207 | 445 | 260 | 298 | 162 | 27 | 340 | 45 | 20 | 183 | 255 | 245 |
| 21 | 207 | 423 | 254 | 317 | 159 | 31 | 352 | 45 | 18 | 121 | 265 | 241 |
| 22 | 205 | 419 | 249 | 301 | 156 | 31 | 300 | 46 | 26 | 34 | 277 | 310 |
| 23 | 211 | 412 | 244 | 311 | 152 | 37 | 208 | 46 | 26 | 123 | 330 | 298 |
| 24 | 220 | 411 | 237 | 327 | 149 | 57 | 178 | 88 | 23 | 171 | 280 | 328 |
| 25 | 215 | 403 | 231 | 312 | 147 | 38 | 183 | 163 | 17 | 175 | 267 | 377 |
| 26 | 213 | 398 | 230 | 291 | 148 | 54 | 181 | 15 | 17 | 163 | 332 | 360 |
| 27 | 215 | 395 | 228 | 317 | 145 | 132 | 180 | 18 | 67 | 160 | 318 | 399 |
| 28 | 209 | 388 | 223 | 332 | 142 | 160 | 169 | 17 | 71 | 164 | 286 | 430 |
| 29 | 206 | 382 | 220 | 314 | --- | 180 | 181 | 19 | 70 | 155 | 269 | 478 |
| 30 | 207 | 376 | 216 | 293 | --- | 200 | 142 | 21 | 82 | 144 | 258 | 536 |
| 31 | 207 | --- | 211 | 276 | --- | 211 | --- | 20 | --- | 146 | 242 | --- |
| TOTAL | 6290 | 10515 | 8963 | 8712 | 5100 | 2748 | 9751 | 1806 | 816 | 4400 | 7705 | 8461 |
| MEAN | 203 | 351 | 289 | 281 | 182 | 88.6 | 325 | 58.3 | 27.2 | 142 | 249 | 282 |
| MAX | 220 | 445 | 389 | 332 | 266 | 211 | 465 | 163 | 82 | 190 | 332 | 536 |
| MIN | 188 | 235 | 211 | 194 | 80 | 25 | 142 | 15 | 14 | 34 | 191 | 181 |

WTR YR 1986 TOTAL 75267.0 MEAN 206 MAX 536 MIN 14

## 05426000 CRAWFISH RIVER AT MILFORD, WI

LOCATION.--Lat 43°06'00", long 88°50'58", in SW 1/4 sec.4, T.7 N., R.14 E., Jefferson County, Hydrologic Unit 07090002, on left bank near upstream side of highway bridge in Milford, 1.4 mi downstream from Rock Creek and 9.8 mi upstream from mouth.

DRAINAGE AREA.--762 mi$^2$.

PERIOD OF RECORD.--June 1931 to current year.

REVISED RECORDS.--WSP 975: 1937-38. WSP 1438: 1932-33(M), 1935(M), 1937, 1938-41(M), 1943-44(M), 1947-48(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 779.40 ft above National Geodetic Vertical Datum of 1929. Prior to July 28, 1966, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records are good except for ice-affected period, which is fair. Some diurnal fluctuation at lower flows, due to manipulation of gates on small dams upstream.

AVERAGE DISCHARGE.--55 years, 393 ft$^3$/s, 7.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft$^3$/s Apr. 6, 1959, gage height, 11.15 ft; minimum observed, 0.2 ft$^3$/s Sept. 15, 1958, gage height, 1.11 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,250 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 21 | 2300 | 2,400 | 6.95 | July 17 | 0700 | 1,620 | 5.25 |
| Mar. 24 | 0100 | *3,740 | *9.10 | Sept. 30 | 2400 | R 3,340 | 8.48 |

R Stage rising, peak occurred Oct. 4, 1986 at 1400, 3,530 ft$^3$/s, gage height 8.78 ft.

Minimum daily discharge, 185 ft$^3$/s June 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Mar. 10.)

| | | | |
|---|---|---|---|
| 2.2 | 171 | 6.0 | 1,950 |
| 2.5 | 282 | 8.0 | 3,040 |
| 3.0 | 510 | 10.0 | 4,340 |
| 4.0 | 1,030 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 572 | 1100 | 1600 | 460 | 580 | 700 | 2820 | 815 | 304 | 955 | 757 | 1110 |
| 2 | 557 | 1380 | 1500 | 450 | 580 | 720 | 2670 | 780 | 262 | 956 | 702 | 1070 |
| 3 | 554 | 1540 | 1400 | 440 | 600 | 720 | 2520 | 712 | 222 | 921 | 642 | 1020 |
| 4 | 554 | 1730 | 1300 | 430 | 620 | 720 | 2420 | 599 | 219 | 825 | 583 | 977 |
| 5 | 591 | 1850 | 1300 | 430 | 640 | 740 | 2280 | 549 | 227 | 761 | 537 | 925 |
| 6 | 545 | 1910 | 1200 | 420 | 660 | 740 | 2180 | 571 | 203 | 748 | 606 | 864 |
| 7 | 546 | 1960 | 1100 | 430 | 680 | 760 | 2120 | 563 | 198 | 694 | 696 | 797 |
| 8 | 505 | 1960 | 1000 | 460 | 700 | 800 | 2080 | 523 | 206 | 692 | 687 | 730 |
| 9 | 618 | 1990 | 1000 | 490 | 740 | 1000 | 2000 | 474 | 185 | 655 | 671 | 677 |
| 10 | 651 | 2000 | 1000 | 520 | 780 | 1200 | 1900 | 428 | 187 | 608 | 677 | 714 |
| 11 | 646 | 1930 | 980 | 540 | 780 | 1470 | 1810 | 397 | 190 | 701 | 672 | 1100 |
| 12 | 715 | 1890 | 980 | 540 | 800 | 1630 | 1730 | 375 | 221 | 901 | 644 | 1450 |
| 13 | 835 | 1890 | 960 | 540 | 800 | 1790 | 1650 | 353 | 226 | 1150 | 616 | 1800 |
| 14 | 932 | 1920 | 920 | 540 | 780 | 1980 | 1550 | 350 | 262 | 1360 | 590 | 2090 |
| 15 | 993 | 1930 | 900 | 560 | 780 | 2130 | 1530 | 344 | 294 | 1510 | 601 | 2280 |
| 16 | 1010 | 1960 | 880 | 560 | 780 | 2280 | 1510 | 382 | 292 | 1600 | 580 | 2360 |
| 17 | 991 | 2020 | 820 | 560 | 760 | 2500 | 1440 | 425 | 285 | 1610 | 566 | 2370 |
| 18 | 1000 | 2120 | 740 | 560 | 760 | 2740 | 1360 | 520 | 263 | 1600 | 539 | 2340 |
| 19 | 1020 | 2240 | 700 | 580 | 740 | 2960 | 1290 | 573 | 252 | 1570 | 519 | 2250 |
| 20 | 1020 | 2300 | 680 | 580 | 740 | 3250 | 1280 | 593 | 241 | 1510 | 511 | 2160 |
| 21 | 1020 | 2390 | 640 | 580 | 740 | 3420 | 1270 | 597 | 206 | 1410 | 506 | 2090 |
| 22 | 1010 | 2390 | 620 | 600 | 720 | 3540 | 1190 | 577 | 253 | 1310 | 478 | 2110 |
| 23 | 991 | 2350 | 600 | 600 | 720 | 3670 | 1080 | 536 | 272 | 1190 | 480 | 2280 |
| 24 | 1050 | 2240 | 580 | 620 | 720 | 3730 | 1020 | 488 | 299 | 1060 | 457 | 2520 |
| 25 | 1060 | 2160 | 560 | 640 | 700 | 3650 | 1010 | 466 | 284 | 1040 | 433 | 2800 |
| 26 | 1060 | 2090 | 540 | 640 | 700 | 3670 | 970 | 434 | 277 | 942 | 538 | 2950 |
| 27 | 1100 | 2030 | 520 | 620 | 700 | 3590 | 917 | 423 | 452 | 850 | 773 | 3040 |
| 28 | 1080 | 1960 | 500 | 620 | 700 | 3420 | 848 | 398 | 676 | 880 | 951 | 3090 |
| 29 | 1060 | 1820 | 490 | 600 | --- | 3280 | 853 | 377 | 858 | 857 | 1060 | 3180 |
| 30 | 1020 | 1700 | 480 | 580 | --- | 3150 | 834 | 349 | 934 | 822 | 1120 | 3280 |
| 31 | 987 | --- | 470 | 560 | --- | 2950 | --- | 317 | --- | 811 | 1130 | --- |
| TOTAL | 26293 | 58750 | 26960 | 16750 | 20000 | 68900 | 48132 | 15288 | 9250 | 32499 | 20322 | 56424 |
| MEAN | 848 | 1958 | 870 | 540 | 714 | 2223 | 1604 | 493 | 308 | 1048 | 656 | 1881 |
| MAX | 1100 | 2390 | 1600 | 640 | 800 | 3730 | 2820 | 815 | 934 | 1610 | 1130 | 3280 |
| MIN | 505 | 1100 | 470 | 420 | 580 | 700 | 834 | 317 | 185 | 608 | 433 | 677 |
| CFSM | 1.11 | 2.57 | 1.14 | .71 | .94 | 2.92 | 2.11 | .65 | .40 | 1.38 | .86 | 2.47 |
| IN. | 1.28 | 2.87 | 1.32 | .82 | .98 | 3.36 | 2.35 | .75 | .45 | 1.59 | .99 | 2.75 |

CAL YR 1985 TOTAL 280612 MEAN 769 MAX 2960 MIN 41 CFSM 1.01 IN 13.70
WTR YR 1986 TOTAL 399568 MEAN 1095 MAX 3730 MIN 185 CFSM 1.44 IN 19.51

## 05426031 ROCK RIVER AT JEFFERSON, WI

LOCATION.--Lat 42°59'46", long 88°48'26", in sec.2, T.6 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, on right bank 30 ft downstream from bridge on State Highway 26, in Jefferson.

DRAINAGE AREA.--1,850 $mi^2$.

PERIOD OF RECORD.--April 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage 774.97 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of National Resources). Auxiliary water-stage recorder 6.9 mi downstream from base gage to provide slope data.

REMARKS.--Estimated daily discharges: Period of ice effect, Dec. 3 to Mar. 21. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--8 years, 1,510 $ft^3/s$, 11.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 $ft^3/s$ Apr. 1, 1979, gage height, 10.79 ft; maximum gage height, 10.84 ft Apr. 2, 1979; minimum daily discharge, 90 $ft^3/s$ July 18, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,200 $ft^3/s$ Mar. 25, gage height, 9.33 ft; minimum daily discharge, 438 $ft^3/s$ June 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1030 | 2520 | 3490 | 1200 | 1200 | 1400 | 5810 | 2460 | 636 | 1960 | 1470 | 1720 |
| 2 | 1010 | 3150 | 3510 | 1200 | 1200 | 1400 | 5630 | 2360 | 520 | 1970 | 1410 | 1620 |
| 3 | 986 | 3390 | 3500 | 1200 | 1200 | 1500 | 5460 | 2260 | 473 | 1920 | 1280 | 1560 |
| 4 | 1010 | 3560 | 3500 | 1100 | 1300 | 1500 | 5370 | 2200 | 452 | 1740 | 1140 | 1500 |
| 5 | 1070 | 3620 | 3500 | 1100 | 1300 | 1500 | 5230 | 2140 | 452 | 1630 | 1010 | 1360 |
| 6 | 1030 | 3620 | 3500 | 1100 | 1300 | 1400 | 5080 | 2070 | 438 | 1520 | 1150 | 1230 |
| 7 | 1030 | 3660 | 3400 | 1100 | 1400 | 1400 | 4940 | 1970 | 444 | 1440 | 1540 | 1130 |
| 8 | 1070 | 3650 | 3400 | 1200 | 1400 | 1400 | 4760 | 1790 | 462 | 1450 | 1510 | 1050 |
| 9 | 1190 | 3700 | 3300 | 1200 | 1500 | 1700 | 4550 | 1710 | 444 | 1410 | 1490 | 985 |
| 10 | 1330 | 3760 | 3200 | 1200 | 1500 | 2300 | 4380 | 1630 | 441 | 1220 | 1490 | 1220 |
| 11 | 1350 | 3740 | 3000 | 1200 | 1500 | 3000 | 4180 | 1560 | 493 | 1290 | 1470 | 2370 |
| 12 | 1570 | 3740 | 2800 | 1200 | 1600 | 3400 | 4030 | 1230 | 549 | 1600 | 1390 | 3140 |
| 13 | 1760 | 3820 | 2700 | 1200 | 1600 | 3800 | 3870 | 1130 | 600 | 2020 | 1280 | 3650 |
| 14 | 1930 | 3920 | 2600 | 1300 | 1600 | 4100 | 3740 | 1170 | 684 | 2420 | 1300 | 3950 |
| 15 | 1990 | 3990 | 2400 | 1300 | 1600 | 4300 | 3670 | 1210 | 789 | 2610 | 1280 | 4140 |
| 16 | 1920 | 4110 | 2300 | 1300 | 1600 | 4600 | 3610 | 1300 | 858 | 2870 | 1170 | 4260 |
| 17 | 1880 | 4220 | 2200 | 1300 | 1600 | 5000 | 3510 | 1350 | 869 | 2930 | 1060 | 4290 |
| 18 | 1920 | 4430 | 2000 | 1300 | 1600 | 5600 | 3400 | 1610 | 859 | 2890 | 992 | 4280 |
| 19 | 2020 | 4670 | 1900 | 1300 | 1600 | 6000 | 3280 | 1630 | 831 | 2810 | 935 | 4220 |
| 20 | 2040 | 4720 | 1800 | 1300 | 1500 | 6000 | 3190 | 1610 | 729 | 2680 | 854 | 4130 |
| 21 | 2060 | 4750 | 1700 | 1300 | 1500 | 6400 | 3100 | 1620 | 626 | 2520 | 811 | 4040 |
| 22 | 2050 | 4710 | 1700 | 1400 | 1500 | 6790 | 2990 | 1610 | 653 | 2380 | 797 | 4120 |
| 23 | 2080 | 4610 | 1600 | 1400 | 1500 | 6860 | 2890 | 1580 | 677 | 2220 | 718 | 4720 |
| 24 | 2250 | 4380 | 1500 | 1400 | 1500 | 7000 | 2810 | 1530 | 699 | 2050 | 693 | 5000 |
| 25 | 2280 | 3970 | 1500 | 1400 | 1500 | 7110 | 2750 | 1460 | 692 | 1860 | 659 | 5420 |
| 26 | 2320 | 4170 | 1400 | 1400 | 1400 | 6980 | 2750 | 1330 | 711 | 1530 | 837 | 5650 |
| 27 | 2330 | 4200 | 1400 | 1400 | 1400 | 6870 | 2690 | 1250 | 1220 | 1460 | 1220 | 5730 |
| 28 | 2300 | 4120 | 1300 | 1300 | 1400 | 6700 | 2620 | 1200 | 1740 | 1540 | 1540 | 5740 |
| 29 | 2260 | 3330 | 1300 | 1300 | --- | 6490 | 2580 | 1060 | 1910 | 1580 | 1710 | 6050 |
| 30 | 2210 | 3120 | 1300 | 1300 | --- | 6230 | 2540 | 912 | 1930 | 1530 | 1760 | 6350 |
| 31 | 2160 | --- | 1200 | 1200 | --- | 6020 | --- | 766 | --- | 1500 | 1780 | --- |
| TOTAL | 53436 | 117350 | 73900 | 39100 | 40800 | 134750 | 115410 | 48708 | 22881 | 60550 | 37746 | 104625 |
| MEAN | 1724 | 3912 | 2384 | 1261 | 1457 | 4347 | 3847 | 1571 | 763 | 1953 | 1218 | 3488 |
| MAX | 2330 | 4750 | 3510 | 1400 | 1600 | 7110 | 5810 | 2460 | 1930 | 2930 | 1780 | 6350 |
| MIN | 986 | 2520 | 1200 | 1100 | 1200 | 1400 | 2540 | 766 | 438 | 1220 | 659 | 985 |
| CFSM | .93 | 2.12 | 1.29 | .68 | .79 | 2.35 | 2.08 | .85 | .41 | 1.06 | .66 | 1.89 |
| IN. | 1.07 | 2.36 | 1.49 | .79 | .82 | 2.71 | 2.32 | .98 | .46 | 1.22 | .76 | 2.10 |

CAL YR 1985 TOTAL 632148 MEAN 1732 MAX 5290 MIN 90 CFSM .94 IN 12.71
WTR YR 1986 TOTAL 849256 MEAN 2327 MAX 7110 MIN 438 CFSM 1.26 IN 17.08

## 05426250 BARK RIVER NEAR ROME, WI

**LOCATION.**--Lat 42°57'39", long 88°40'09", in SE 1/4 SW 1/4 sec.24, T.6 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank just upstream from bridge on Cushman Road, 2.8 mi southwest of Rome.

**DRAINAGE AREA.**--122 $mi^2$.

**PERIOD OF RECORD.**--November 1979 to September 1982. October 1982 to September 1983 (fragmentary). October 1983 to present.

**GAGE.**--Water-stage recorder. Elevation of gage is 810 ft, from topographic map.

**REMARKS.**--Estimated daily discharges: None, except for ice periods listed in rating table below. Records are good except for ice-affected periods, which are fair.

**AVERAGE DISCHARGE.**--5 years, 97.7 $ft^3/s$, 10.88 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 443 $ft^3/s$ Apr. 6, 1982, gage height, 2.39 ft; minimum, 10 $ft^3/s$ July 22, 23, 1985.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 399 $ft^3/s$ Sept. 30, stage rising, peak occurred Oct. 1, 1986; maximum peak discharge, 388 $ft^3/s$, Mar. 21, gage height, 2.27 ft; minimum, 25 $ft^3/s$ Oct. 3, gage height, 0.71 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Mar. 13, 14, July 24 to Sept. 11; stage-discharge relation affected by ice Dec. 15 to Feb. 3, Feb. 7-21, and Feb. 28 to Mar. 2.)

| | | | |
|---|---|---|---|
| 0.6 | 18 | 1.5 | 171 |
| 0.8 | 42 | 2.0 | 293 |
| 1.0 | 73 | 2.5 | 430 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 38 | 160 | 195 | 98 | 82 | 110 | 255 | 107 | 78 | 127 | 91 | 140 |
| 2 | 35 | 231 | 175 | 98 | 82 | 110 | 245 | 101 | 76 | 122 | 89 | 132 |
| 3 | 26 | 220 | 179 | 98 | 84 | 114 | 246 | 107 | 70 | 121 | 84 | 131 |
| 4 | 36 | 213 | 193 | 96 | 102 | 113 | 243 | 104 | 70 | 130 | 74 | 120 |
| 5 | 35 | 214 | 196 | 90 | 121 | 113 | 233 | 104 | 85 | 123 | 69 | 107 |
| 6 | 42 | 214 | 192 | 86 | 124 | 112 | 219 | 105 | 84 | 114 | 82 | 99 |
| 7 | 47 | 208 | 190 | 84 | 120 | 111 | 211 | 106 | 85 | 105 | 94 | 85 |
| 8 | 50 | 202 | 184 | 84 | 110 | 106 | 202 | 108 | 83 | 106 | 101 | 61 |
| 9 | 62 | 207 | 179 | 86 | 100 | 121 | 197 | 106 | 77 | 104 | 103 | 66 |
| 10 | 91 | 210 | 173 | 88 | 98 | 194 | 188 | 103 | 62 | 99 | 101 | 120 |
| 11 | 84 | 204 | 168 | 90 | 96 | 233 | 165 | 99 | 57 | 112 | 105 | 235 |
| 12 | 89 | 202 | 145 | 92 | 94 | 255 | 139 | 103 | 60 | 139 | 92 | 228 |
| 13 | 89 | 207 | 129 | 90 | 94 | 284 | 141 | 105 | 64 | 138 | 95 | 219 |
| 14 | 89 | 213 | 124 | 86 | 92 | 300 | 149 | 100 | 81 | 129 | 112 | 221 |
| 15 | 87 | 213 | 120 | 84 | 86 | 305 | 138 | 100 | 94 | 133 | 103 | 232 |
| 16 | 82 | 220 | 120 | 86 | 84 | 324 | 136 | 106 | 85 | 139 | 118 | 226 |
| 17 | 80 | 209 | 120 | 88 | 84 | 337 | 135 | 111 | 82 | 145 | 123 | 220 |
| 18 | 77 | 241 | 120 | 90 | 82 | 357 | 133 | 133 | 86 | 134 | 115 | 217 |
| 19 | 85 | 252 | 120 | 94 | 90 | 365 | 123 | 131 | 82 | 120 | 89 | 216 |
| 20 | 88 | 234 | 120 | 96 | 100 | 316 | 121 | 127 | 77 | 114 | 72 | 216 |
| 21 | 85 | 246 | 110 | 100 | 110 | 371 | 114 | 125 | 72 | 110 | 75 | 211 |
| 22 | 83 | 249 | 110 | 100 | 116 | 348 | 115 | 118 | 74 | 108 | 62 | 221 |
| 23 | 85 | 237 | 110 | 100 | 115 | 329 | 107 | 118 | 73 | 105 | 82 | 267 |
| 24 | 106 | 226 | 110 | 100 | 112 | 315 | 105 | 112 | 74 | 100 | 77 | 284 |
| 25 | 110 | 215 | 100 | 94 | 113 | 304 | 107 | 109 | 71 | 99 | 77 | 341 |
| 26 | 115 | 207 | 100 | 88 | 112 | 301 | 122 | 101 | 69 | 99 | 107 | 333 |
| 27 | 116 | 203 | 100 | 84 | 112 | 296 | 123 | 97 | 103 | 92 | 158 | 337 |
| 28 | 115 | 193 | 100 | 82 | 110 | 292 | 130 | 97 | 123 | 98 | 164 | 329 |
| 29 | 116 | 175 | 100 | 80 | --- | 286 | 118 | 92 | 121 | 98 | 172 | 367 |
| 30 | 114 | 183 | 100 | 80 | --- | 279 | 126 | 86 | 127 | 99 | 144 | 388 |
| 31 | 113 | --- | 100 | 80 | --- | 273 | --- | 82 | --- | 98 | 129 | --- |
| TOTAL | 2470 | 6408 | 4282 | 2792 | 2825 | 7674 | 4786 | 3303 | 2445 | 3560 | 3159 | 6369 |
| MEAN | 79.7 | 214 | 138 | 90.1 | 101 | 248 | 160 | 107 | 81.5 | 115 | 102 | 212 |
| MAX | 116 | 252 | 196 | 100 | 124 | 371 | 255 | 133 | 127 | 145 | 172 | 388 |
| MIN | 26 | 160 | 100 | 80 | 82 | 106 | 105 | 82 | 57 | 92 | 62 | 61 |
| CFSM | .65 | 1.75 | 1.13 | .74 | .83 | 2.03 | 1.31 | .88 | .67 | .94 | .84 | 1.74 |
| IN. | .75 | 1.95 | 1.31 | .85 | .86 | 2.34 | 1.46 | 1.01 | .75 | 1.09 | .96 | 1.94 |

CAL YR 1985 TOTAL 37951 MEAN 104 MAX 314 MIN 11 CFSM .85 IN 11.57
WTR YR 1986 TOTAL 50073 MEAN 137 MAX 388 MIN 26 CFSM 1.12 IN 15.27

## 05427570 ROCK RIVER AT INDIANFORD, WI

LOCATION.--Lat 42°48'15", long 89°05'25", in SW 1/4 SW 1/4 sec.16, T.4 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank 50 ft upstream from bridge on County Trunk Highways F and M, 250 ft upstream from dam in Indianford, and 1.8 mi upstream from Yahara River.

DRAINAGE AREA.--2,630 $mi^2$.

PERIOD OF RECORD.--May 1975 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 763.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by dam in Indianford. Discharge is adjusted for flow through wicket gates.

AVERAGE DISCHARGE.--11 years, 1,894 $ft^3/s$, 9.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 $ft^3/s$ Apr. 5, 1979, gage height, 16.23 ft; minimum daily, 69 $ft^3/s$ May 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,820 $ft^3/s$ Mar. 30, gage height, 15.22 ft; minimum daily discharge, 860 $ft^3/s$ June 11.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1490 | 2860 | 5260 | 2500 | 1970 | 2140 | 8530 | 3570 | 1850 | 1870 | 2180 | 1970 |
| 2 | 1560 | 3150 | 5050 | 2500 | 1930 | 2130 | 8420 | 3620 | 1700 | 2240 | 2100 | 1990 |
| 3 | 1570 | 3410 | 4860 | 2450 | 1920 | 2100 | 8210 | 3480 | 1480 | 2270 | 2020 | 1950 |
| 4 | 1500 | 3730 | 4790 | 2390 | 2000 | 2070 | 8090 | 3170 | 1450 | 2140 | 1970 | 1930 |
| 5 | 1570 | 3950 | 4770 | 2220 | 2090 | 2050 | 7670 | 3060 | 1250 | 2160 | 1890 | 2050 |
| 6 | 1580 | 4130 | 4760 | 2180 | 2200 | 2030 | 7470 | 3100 | 922 | 2240 | 1960 | 2000 |
| 7 | 1600 | 4290 | 4720 | 2060 | 2200 | 2000 | 7320 | 3120 | 887 | 2270 | 1910 | 1910 |
| 8 | 1440 | 4490 | 4710 | 2030 | 2240 | 2050 | 7230 | 3100 | 939 | 2320 | 1930 | 1820 |
| 9 | 1750 | 4830 | 4660 | 1980 | 2310 | 2080 | 7070 | 2900 | 979 | 2400 | 1940 | 1810 |
| 10 | 1780 | 5040 | 4610 | 2030 | 2370 | 2240 | 6810 | 2770 | 904 | 2280 | 1970 | 1890 |
| 11 | 1830 | 4890 | 4500 | 2020 | 2430 | 2590 | 6570 | 2650 | 860 | 2200 | 1970 | 2180 |
| 12 | 1880 | 4850 | 4350 | 1970 | 2440 | 3020 | 6370 | 2560 | 912 | 2150 | 1960 | 2570 |
| 13 | 1970 | 4960 | 4160 | 1920 | 2440 | 3430 | 6120 | 2380 | 959 | 2150 | 1920 | 2970 |
| 14 | 2080 | 5020 | 3830 | 1970 | 2510 | 3870 | 5840 | 2240 | 966 | 2370 | 1820 | 3380 |
| 15 | 2160 | 5190 | 3800 | 1880 | 2430 | 4280 | 5720 | 2210 | 1010 | 2520 | 1920 | 3780 |
| 16 | 2260 | 5030 | 3730 | 1900 | 2460 | 4690 | 5650 | 2170 | 1010 | 2740 | 1920 | 4060 |
| 17 | 2250 | 5310 | 3460 | 1860 | 2410 | 5070 | 5440 | 2280 | 1120 | 2930 | 1950 | 4280 |
| 18 | 2390 | 5480 | 3240 | 1830 | 2340 | 5510 | 5240 | 2410 | 1070 | 3100 | 1880 | 4540 |
| 19 | 2550 | 5620 | 3230 | 1860 | 2330 | 6020 | 4930 | 2460 | 1100 | 3240 | 1760 | 4710 |
| 20 | 2600 | 5660 | 3150 | 1860 | 2300 | 6520 | 5040 | 2410 | 1150 | 3270 | 1690 | 4850 |
| 21 | 2420 | 6180 | 3080 | 1840 | 2290 | 6910 | 4920 | 2370 | 1010 | 3220 | 1660 | 4990 |
| 22 | 2320 | 6200 | 3060 | 1850 | 2240 | 7300 | 4680 | 2390 | 1060 | 3170 | 1570 | 5060 |
| 23 | 2310 | 6230 | 3100 | 1890 | 2260 | 7770 | 4400 | 2360 | 1060 | 3080 | 1650 | 5220 |
| 24 | 2430 | 6170 | 3000 | 1900 | 2260 | 8090 | 4270 | 2330 | 1130 | 2940 | 1460 | 5440 |
| 25 | 2510 | 6120 | 2750 | 1850 | 2240 | 8160 | 4260 | 2330 | 1030 | 3020 | 1350 | 5810 |
| 26 | 2500 | 5960 | 2670 | 1920 | 2240 | 8480 | 4110 | 2300 | 986 | 2920 | 1450 | 6150 |
| 27 | 2660 | 5900 | 2680 | 1780 | 2260 | 8650 | 3970 | 2240 | 1080 | 2660 | 1580 | 6450 |
| 28 | 2700 | 5800 | 2550 | 1900 | 2140 | 8670 | 3700 | 2160 | 1270 | 2540 | 1600 | 6750 |
| 29 | 2680 | 5640 | 2540 | 1980 | --- | 8690 | 3760 | 2090 | 1390 | 2450 | 1660 | 7220 |
| 30 | 2700 | 5320 | 2510 | 1970 | --- | 8760 | 3700 | 1960 | 1540 | 2350 | 1770 | 7610 |
| 31 | 2710 | --- | 2520 | 1980 | --- | 8600 | --- | 1870 | --- | 2280 | 1870 | --- |
| TOTAL | 65750 | 151410 | 116100 | 62270 | 63250 | 155970 | 175510 | 80060 | 34074 | 79490 | 56280 | 117340 |
| MEAN | 2121 | 5047 | 3745 | 2009 | 2259 | 5031 | 5850 | 2583 | 1136 | 2564 | 1815 | 3911 |
| MAX | 2710 | 6230 | 5260 | 2500 | 2510 | 8760 | 8530 | 3620 | 1850 | 3270 | 2180 | 7610 |
| MIN | 1440 | 2860 | 2510 | 1780 | 1920 | 2000 | 3700 | 1870 | 860 | 1870 | 1350 | 1810 |
| CFSM | .81 | 1.92 | 1.42 | .76 | .86 | 1.91 | 2.22 | .98 | .43 | .98 | .69 | 1.49 |
| IN. | .93 | 2.14 | 1.64 | .88 | .89 | 2.21 | 2.48 | 1.13 | .48 | 1.12 | .80 | 1.66 |

CAL YR 1985 TOTAL 934306 MEAN 2560 MAX 6860 MIN 181 CFSM .97 IN 13.22
WTR YR 1986 TOTAL 1157504 MEAN 3171 MAX 8760 MIN 860 CFSM 1.21 IN 16.37

## 05427948 PHEASANT BRANCH AT MIDDLETON, WI

LOCATION.--Lat 43°06'12", long 89°30'42", in NE 1/4 NW 1/4 sec.11, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank at bridge on U.S. Highway 12, 2.5 mi upstream from Lake Mendota, at Middleton.

DRAINAGE AREA.--18.3 mi$^2$, of which 1.22 mi$^2$ is noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1974 to current year.

GAGE.--Water-stage recorder, parshall flume, and concrete control. Datum of gage is 901.5 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records are good

AVERAGE DISCHARGE.--12 years, 4.34 ft$^3$/s, 3.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft$^3$/s Mar. 21, 1975, gage height, 7.54 ft; maximum gage height, 8.54 ft Mar. 12, 1976; minimum discharge, 0.29 ft$^3$/s Jan. 26, 1978, gage height, 3.56 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 1 | 2045 | 105 | 5.72 | Mar. 19 | 0145 | *123 | *5.86 |

Minimum discharge, 1.1 ft$^3$/s Jan. 9, result of freezeup, gage height, 3.88 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 4.0 | 1.4 | 4.6 | 9.6 |
| 4.2 | 2.2 | 4.8 | 20 |
| 4.3 | 2.8 | 5.0 | 34 |
| 4.4 | 3.7 | 5.5 | 80 |
| 4.5 | 5.3 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.9 | 78 | 3.0 | 2.4 | 2.3 | 2.4 | 4.6 | 2.8 | 2.8 | 3.2 | 3.1 | 2.0 |
| 2 | 2.5 | 41 | 2.0 | 2.4 | 2.5 | 2.5 | 3.7 | 2.6 | 2.6 | 3.1 | 2.9 | 1.9 |
| 3 | 2.3 | 13 | 3.1 | 2.3 | 2.5 | 2.7 | 5.4 | 2.5 | 2.5 | 2.8 | 2.8 | 2.0 |
| 4 | 2.6 | 6.9 | 3.1 | 2.3 | 5.3 | 2.9 | 4.5 | 2.5 | 2.5 | 2.8 | 2.8 | 2.0 |
| 5 | 3.2 | 4.9 | 3.1 | 2.2 | 11 | 3.1 | 4.6 | 2.8 | 2.5 | 2.7 | 2.8 | 1.8 |
| 6 | 2.4 | 7.0 | 3.1 | 2.4 | 7.7 | 3.1 | 4.1 | 2.6 | 2.6 | 2.8 | 7.2 | 1.8 |
| 7 | 2.2 | 9.0 | 3.1 | 2.2 | 5.9 | 2.8 | 3.8 | 2.4 | 2.7 | 2.9 | 4.2 | 1.8 |
| 8 | 2.3 | 4.8 | 3.1 | 2.2 | 5.1 | 2.8 | 3.6 | 2.3 | 2.5 | 7.9 | 4.0 | 1.9 |
| 9 | 5.3 | 4.5 | 3.1 | 1.4 | 4.8 | 2.8 | 3.4 | 2.3 | 2.3 | 4.4 | 3.1 | 3.7 |
| 10 | 7.9 | 4.5 | 3.1 | 1.5 | 4.3 | 19 | 3.3 | 2.2 | 5.6 | 16 | 5.1 | 11 |
| 11 | 3.9 | 4.7 | 3.1 | 2.1 | 3.9 | 20 | 3.3 | 2.4 | 3.9 | 27 | 3.7 | 32 |
| 12 | 18 | 7.5 | 2.9 | 2.2 | 3.5 | 14 | 3.3 | 2.5 | 2.9 | 13 | 2.9 | 9.8 |
| 13 | 6.8 | 19 | 2.9 | 1.7 | 3.1 | 14 | 3.2 | 6.2 | 2.5 | 6.3 | 2.8 | 4.1 |
| 14 | 4.0 | 16 | 2.9 | 1.8 | 3.0 | 17 | 7.3 | 7.8 | 3.2 | 4.7 | 4.5 | 3.4 |
| 15 | 3.4 | 7.9 | 2.9 | 2.3 | 2.7 | 18 | 4.6 | 7.1 | 3.0 | 5.3 | 3.2 | 3.1 |
| 16 | 3.0 | 28 | 2.9 | 2.6 | 2.8 | 24 | 3.7 | 7.3 | 2.7 | 4.5 | 2.9 | 2.9 |
| 17 | 2.8 | 11 | 2.8 | 2.9 | 2.7 | 33 | 3.4 | 24 | 2.4 | 3.9 | 2.9 | 2.9 |
| 18 | 4.2 | 31 | 2.6 | 2.8 | 2.7 | 73 | 3.2 | 17 | 2.4 | 3.8 | 2.7 | 2.8 |
| 19 | 6.8 | 23 | 2.7 | 2.8 | 2.7 | 79 | 3.2 | 6.0 | 2.4 | 3.6 | 2.5 | 2.9 |
| 20 | 4.4 | 8.9 | 2.7 | 2.8 | 2.9 | 28 | 3.2 | 4.4 | 2.3 | 3.5 | 2.2 | 3.0 |
| 21 | 3.5 | 5.2 | 2.6 | 2.8 | 2.6 | 16 | 3.1 | 3.6 | 2.2 | 3.4 | 2.2 | 12 |
| 22 | 3.2 | 4.7 | 2.7 | 2.8 | 2.5 | 23 | 2.9 | 3.4 | 5.5 | 3.3 | 2.0 | 14 |
| 23 | 7.8 | 4.4 | 2.8 | 2.8 | 2.4 | 27 | 2.9 | 3.2 | 3.0 | 3.0 | 2.0 | 8.7 |
| 24 | 16 | 3.9 | 2.7 | 2.8 | 2.3 | 20 | 2.8 | 3.0 | 2.5 | 2.8 | 1.9 | 9.7 |
| 25 | 5.1 | 3.8 | 2.5 | 2.8 | 2.4 | 19 | 3.0 | 2.9 | 2.5 | 5.5 | 1.9 | 41 |
| 26 | 4.0 | 3.7 | 2.4 | 2.5 | 2.4 | 16 | 5.7 | 2.8 | 2.5 | 3.4 | 34 | 12 |
| 27 | 3.4 | 3.6 | 2.3 | 2.3 | 2.5 | 10 | 3.2 | 3.3 | 7.2 | 3.8 | 11 | 6.1 |
| 28 | 3.1 | 3.5 | 2.4 | 2.5 | 2.3 | 6.5 | 3.0 | 3.3 | 3.7 | 9.8 | 3.4 | 4.4 |
| 29 | 2.9 | 3.0 | 2.4 | 2.4 | --- | 4.8 | 2.8 | 3.2 | 3.2 | 3.9 | 2.7 | 22 |
| 30 | 2.8 | 2.9 | 2.4 | 2.3 | --- | 4.2 | 3.1 | 3.0 | 3.0 | 3.5 | 2.4 | 18 |
| 31 | 5.1 | --- | 2.4 | 2.2 | --- | 4.0 | --- | 2.9 | --- | 3.3 | 2.2 | --- |
| TOTAL | 147.8 | 369.3 | 85.8 | 73.5 | 100.8 | 514.6 | 111.9 | 144.3 | 91.6 | 169.9 | 134.0 | 244.7 |
| MEAN | 4.77 | 12.3 | 2.77 | 2.37 | 3.60 | 16.6 | 3.73 | 4.65 | 3.05 | 5.48 | 4.32 | 8.16 |
| MAX | 18 | 78 | 3.1 | 2.9 | 11 | 79 | 7.3 | 24 | 7.2 | 27 | 34 | 41 |
| MIN | 2.2 | 2.9 | 2.0 | 1.4 | 2.3 | 2.4 | 2.8 | 2.2 | 2.2 | 2.7 | 1.9 | 1.8 |
| CFSM | .26 | .67 | .15 | .13 | .20 | .91 | .20 | .25 | .17 | .30 | .24 | .45 |
| IN. | .30 | .75 | .17 | .15 | .20 | 1.05 | .23 | .29 | .19 | .35 | .27 | .50 |

CAL YR 1985 TOTAL 2336.89 MEAN 6.40 MAX 310 MIN .88 CFSM .35 IN 4.75
WTR YR 1986 TOTAL 2188.20 MEAN 6.00 MAX 79 MIN 1.4 CFSM .33 IN 4.45

## 05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITRO-GEN, TOTAL (MG/L AS N) (00600) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) |
|---|---|---|---|---|---|---|---|---|---|
| MAY , 1986 | | | | | | | | | |
| 17... | 1605 | 32 | 3.0 | .780 | 2.9 | 3.7 | 6.7 | 1.10 | .460 |
| 17... | 2000 | 47 | 4.9 | .630 | 4.0 | 4.6 | 9.5 | 1.50 | .330 |
| 18... | 0305 | 28 | 8.6 | 1.20 | 3.0 | 4.2 | 13 | 1.20 | .810 |
| JUL | | | | | | | | | |
| 10... | 1715 | 37 | .80 | .070 | 1.9 | 2.0 | 2.8 | .850 | .140 |
| 10... | 2015 | 47 | 1.6 | .390 | 4.4 | 4.8 | 6.4 | 2.60 | .200 |
| 11... | 0015 | 33 | 4.7 | .280 | 2.4 | 2.7 | 7.4 | 1.40 | .210 |
| 11... | 0515 | 23 | 7.2 | .860 | 3.4 | 4.3 | 12 | 1.20 | .700 |
| AUG | | | | | | | | | |
| 26... | 1325 | 58 | 2.8 | .520 | 1.4 | 1.9 | 4.7 | 1.40 | .320 |
| 26... | 1340 | 59 | 3.0 | .500 | 1.4 | 1.9 | 4.9 | 1.10 | .350 |
| SEP | | | | | | | | | |
| 29... | 0615 | 31 | 2.8 | 1.70 | 1.7 | 3.4 | 6.2 | .780 | .310 |
| 29... | 0815 | 30 | 2.9 | .990 | 2.3 | 3.3 | 6.2 | .740 | .280 |
| 29... | 1700 | 26 | 13 | 3.00 | 2.0 | 5.0 | 18 | .860 | .290 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) |
|---|---|---|---|---|
| NOV , 1985 | | | | |
| 01... | 0815 | 71 | 393 | 75 |
| 01... | 1215 | 68 | 321 | 59 |
| 01... | 1515 | 83 | 299 | 67 |
| 01... | 1815 | 98 | 417 | 110 |
| 01... | 2115 | 105 | 405 | 115 |
| 02... | 0215 | 77 | 281 | 58 |
| 02... | 1015 | 38 | 165 | 17 |
| 16... | 0330 | 27 | 361 | 26 |
| 16... | 0600 | 34 | 473 | 43 |
| 16... | 1000 | 40 | 609 | 66 |
| 16... | 1630 | 27 | 354 | 26 |
| 18... | 1800 | 45 | 498 | 61 |
| 18... | 1900 | 44 | 390 | 46 |
| 18... | 2030 | 45 | 332 | 40 |
| 18... | 2330 | 42 | 500 | 57 |
| 19... | 0700 | 27 | 244 | 18 |
| MAR , 1986 | | | | |
| 10... | 1245 | 27 | 176 | 13 |
| 10... | 1315 | 29 | 221 | 17 |
| 10... | 1415 | 32 | 246 | 21 |
| 10... | 1715 | 28 | 144 | 11 |
| 11... | 0045 | 23 | 49 | 3.0 |
| 16... | 1515 | 25 | 44 | 3.0 |
| 16... | 1915 | 34 | 84 | 7.7 |
| 17... | 1115 | 23 | 30 | 1.9 |
| 17... | 1415 | 27 | 52 | 3.8 |
| 17... | 1715 | 42 | 196 | 22 |
| 20... | 1315 | 23 | 212 | 13 |
| 22... | 1915 | 38 | 212 | 22 |
| 24... | 0715 | 18 | 45 | 2.2 |
| 24... | 1630 | 20 | 133 | 7.2 |
| 24... | 2230 | 20 | 49 | 2.6 |
| MAY | | | | |
| 13... | 2105 | 9.6 | 168 | 4.4 |
| 17... | 1530 | 27 | 208 | 15 |
| 17... | 1705 | 35 | 259 | 24 |
| 17... | 1905 | 45 | 1120 | 136 |
| 17... | 2100 | 48 | 490 | 64 |
| 17... | 2400 | 38 | 267 | 27 |
| 18... | 0405 | 26 | 109 | 7.7 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) |
|---|---|---|---|---|
| MAY , 1986 | | | | |
| 28... | 0945 | 3.3 | 41 | .37 |
| JUN | | | | |
| 27... | 1610 | 8.0 | 164 | 3.5 |
| 27... | 1611 | 8.0 | 186 | 4.0 |
| JUL | | | | |
| 10... | 1600 | 27 | 116 | 8.5 |
| 10... | 1615 | 41 | 279 | 31 |
| 10... | 1815 | 26 | 1030 | 72 |
| 10... | 1915 | 45 | 1010 | 123 |
| 10... | 2215 | 38 | 1600 | 164 |
| 11... | 0215 | 29 | 576 | 45 |
| 11... | 0815 | 28 | 354 | 27 |
| 11... | 1015 | 33 | 1030 | 92 |
| 11... | 1016 | 33 | 780 | 69 |
| 11... | 1115 | 28 | 482 | 36 |
| 11... | 1315 | 31 | 383 | 32 |
| 11... | 1615 | 28 | 105 | 7.9 |
| 11... | 1915 | 24 | 74 | 4.8 |
| 11... | 2330 | 19 | 275 | 14 |
| 11... | 2400 | 19 | 266 | 14 |
| SEP | | | | |
| 25... | 0800 | 49 | 324 | 43 |
| 25... | 1400 | 32 | 197 | 17 |
| 25... | 1415 | 34 | 152 | 14 |
| 25... | 1416 | 34 | 182 | 17 |
| 25... | 1430 | 34 | 164 | 15 |
| 25... | 1431 | 34 | 170 | 16 |
| 25... | 1545 | 31 | 131 | 11 |
| 25... | 1745 | 27 | 102 | 7.4 |
| 25... | 1945 | 24 | 104 | 6.7 |
| 26... | 0820 | 12 | 46 | 1.5 |
| 26... | 0821 | 12 | 40 | 1.3 |
| 29... | 0530 | 22 | 180 | 11 |
| 29... | 0545 | 25 | 305 | 21 |
| 29... | 0645 | 30 | 365 | 30 |
| 29... | 0745 | 26 | 396 | 28 |
| 29... | 0845 | 30 | 354 | 29 |
| 29... | 0945 | 28 | 428 | 32 |
| 29... | 1015 | 30 | 416 | 34 |
| 29... | 1018 | 29 | 360 | 28 |
| 29... | 1020 | 29 | 382 | 30 |

## 05427965 SPRING HARBOR STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°04'45", long 89°28'15", in NW 1/4 SE 1/4 sec.18, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city park near the junction of Spring Harbor Drive and University Avenue in Madison.

DRAINAGE AREA.--3.29 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 855.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharge: None. Records are good except those for flow less than 0.3 ft$^3$/s, which are poor.

AVERAGE DISCHARGE.--10 years (1977-86), 1.44 ft$^3$/s, 5.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 706 ft$^3$/s Aug. 31, 1981, gage height, 4.04 ft; no flow many days during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 303 ft$^3$/s Sept. 29, gage height, 2.85 ft; no flow on many days during current year.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 0.41 | 0.0 | 0.9 | 12 |
| 0.5 | 0.55 | 1.0 | 18 |
| 0.6 | 1.8 | 1.1 | 26 |
| 0.7 | 3.8 | 1.2 | 34 |
| 0.8 | 6.7 | 1.3 | 42 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .01 | 42 | .00 | .00 | .13 | .21 | 2.0 | .13 | .00 | .00 | .01 | .00 |
| 2 | .01 | 1.8 | .00 | .00 | .35 | 1.2 | .22 | .03 | .00 | .00 | .00 | .00 |
| 3 | .04 | .23 | .01 | .00 | .28 | 1.2 | 3.7 | .00 | .00 | .00 | .00 | .09 |
| 4 | 2.0 | .18 | .06 | .00 | 8.1 | 1.3 | 1.1 | .00 | .00 | .00 | .00 | .04 |
| 5 | .88 | .10 | .06 | .00 | 3.2 | .61 | 1.2 | .43 | .00 | .00 | .01 | .00 |
| 6 | .05 | 3.8 | .04 | .00 | .52 | .27 | .18 | .14 | .00 | .00 | 12 | .00 |
| 7 | .01 | .48 | .00 | .00 | .16 | .07 | .12 | .01 | .00 | .20 | 1.0 | .00 |
| 8 | 1.1 | .43 | .00 | .00 | .21 | .00 | .12 | .00 | .00 | 9.7 | .56 | .03 |
| 9 | 8.2 | 2.4 | .00 | .00 | .13 | .90 | .12 | .01 | .00 | .30 | .02 | 10 |
| 10 | 2.1 | .86 | .06 | .00 | .00 | 21 | .12 | .08 | 7.3 | 18 | 3.6 | 30 |
| 11 | .22 | .36 | .17 | .01 | .00 | 5.0 | .07 | .38 | 1.5 | 1.7 | .07 | 12 |
| 12 | 15 | 2.2 | .12 | .03 | .00 | .60 | .42 | .26 | .17 | .25 | .00 | .14 |
| 13 | .24 | 4.1 | .02 | .01 | .00 | 3.0 | .14 | 9.5 | .05 | .04 | .00 | .02 |
| 14 | .12 | 1.4 | .00 | .00 | .00 | 1.8 | 7.6 | 2.3 | 2.5 | .00 | 3.0 | .39 |
| 15 | .05 | .60 | .00 | .00 | .00 | 1.3 | .28 | 7.8 | .13 | 1.5 | .00 | .01 |
| 16 | .00 | 7.9 | .00 | .01 | .00 | 2.8 | .08 | .83 | .01 | .24 | .00 | .00 |
| 17 | .00 | 2.5 | .00 | .30 | .00 | 3.5 | .00 | 17 | .00 | .06 | .00 | 1.1 |
| 18 | 4.2 | 11 | .00 | 1.0 | .07 | 21 | .00 | .75 | .00 | .06 | .00 | .16 |
| 19 | 1.5 | .84 | .00 | .49 | .68 | 6.9 | .00 | .08 | .00 | .06 | .00 | .21 |
| 20 | .49 | .18 | .00 | .18 | .47 | .37 | .04 | .08 | .01 | .01 | .00 | .07 |
| 21 | .20 | .12 | .00 | .19 | .16 | .34 | .07 | .05 | .01 | .00 | .00 | 7.3 |
| 22 | .19 | .09 | .00 | .33 | .06 | 1.1 | .13 | .06 | 8.4 | .00 | .00 | 1.2 |
| 23 | 16 | .12 | .00 | .14 | .01 | 1.2 | .18 | .00 | .22 | .00 | .00 | 6.1 |
| 24 | 1.2 | .10 | .00 | .08 | .06 | .59 | .06 | .00 | .07 | .00 | .00 | 15 |
| 25 | .17 | .00 | .00 | .08 | .12 | 1.4 | 1.6 | .01 | .06 | 5.9 | .00 | 12 |
| 26 | .11 | .43 | .00 | .05 | .17 | 1.1 | 9.1 | .02 | .06 | .05 | 35 | .21 |
| 27 | .00 | .16 | .00 | .00 | .13 | .42 | .17 | 1.0 | 9.5 | 4.3 | .30 | .05 |
| 28 | .06 | .06 | .00 | .00 | .01 | .54 | .29 | .11 | .08 | 5.5 | .01 | 1.2 |
| 29 | .68 | .00 | .00 | .00 | --- | .46 | .74 | .06 | .06 | .16 | .00 | 29 |
| 30 | .02 | .00 | .00 | .00 | --- | .34 | 1.4 | .06 | .01 | .06 | .00 | 5.5 |
| 31 | 10 | --- | .00 | .00 | --- | .25 | --- | .00 | --- | .06 | .00 | --- |
| TOTAL | 64.85 | 84.44 | .54 | 2.90 | 15.02 | 80.77 | 31.25 | 41.18 | 30.14 | 48.15 | 55.58 | 131.82 |
| MEAN | 2.09 | 2.81 | .017 | .094 | .54 | 2.61 | 1.04 | 1.33 | 1.00 | 1.55 | 1.79 | 4.39 |
| MAX | 16 | 42 | .17 | 1.0 | 8.1 | 21 | 9.1 | 17 | 9.5 | 18 | 35 | 30 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| CFSM | .64 | .85 | .005 | .03 | .16 | .79 | .32 | .40 | .30 | .47 | .54 | 1.33 |
| IN. | .73 | .95 | .01 | .03 | .17 | .91 | .35 | .47 | .34 | .54 | .63 | 1.49 |

CAL YR 1985 TOTAL 495.15 MEAN 1.36 MAX 42 MIN .00 CFSM .41 IN 5.60
WTR YR 1986 TOTAL 586.64 MEAN 1.61 MAX 42 MIN .00 CFSM .49 IN 6.63

## 05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1976 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SEDIMENT, SUSPENDED (MG/L) (80154) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 12... | 0330 | 23 | 659 | 41 |
| 12... | 0400 | 96 | 348 | 90 |
| 12... | 0415 | 131 | 536 | 190 |
| 12... | 0500 | 63 | 243 | 41 |
| 23... | 1550 | 14 | 583 | 22 |
| 23... | 1620 | 52 | 369 | 52 |
| 23... | 1650 | 65 | 219 | 38 |
| 23... | 1820 | 42 | 125 | 14 |
| 23... | 1935 | 64 | 106 | 18 |
| 23... | 2005 | 83 | 106 | 24 |
| 23... | 2235 | 31 | 107 | 9.0 |
| NOV | | | | |
| 01... | 1125 | 37 | 60 | 6.0 |
| 01... | 1345 | 36 | 46 | 4.5 |
| 01... | 1445 | 65 | 49 | 8.6 |
| 01... | 1545 | 82 | 95 | 21 |
| 01... | 1645 | 64 | 101 | 17 |
| 01... | 1745 | 48 | 84 | 11 |
| 01... | 2005 | 20 | 97 | 5.2 |
| 16... | 0055 | 18 | 330 | 16 |
| 16... | 0115 | 43 | 327 | 38 |
| 16... | 0135 | 55 | 339 | 50 |
| 16... | 0235 | 34 | 167 | 15 |
| 16... | 0455 | 12 | 89 | 2.9 |
| FEB , 1986 | | | | |
| 04... | 1340 | 19 | 198 | 10 |
| 04... | 1540 | 18 | 110 | 5.3 |
| 04... | 1825 | 14 | 76 | 2.9 |
| MAR | | | | |
| 17... | 2330 | 20 | 478 | 26 |
| 18... | 0630 | 9.6 | 192 | 5.0 |
| 18... | 0725 | 35 | 578 | 55 |
| 18... | 1125 | 14 | 118 | 4.5 |
| 18... | 1655 | 18 | 267 | 13 |
| APR | | | | |
| 14... | 0945 | 9.6 | 430 | 11 |
| 14... | 1015 | 29 | 655 | 51 |
| 14... | 1045 | 71 | 649 | 124 |
| 14... | 1215 | 33 | 167 | 15 |
| 14... | 1415 | 10 | 61 | 1.6 |
| 25... | 2330 | 10 | 871 | 24 |
| 25... | 2400 | 13 | 885 | 31 |
| 26... | 0030 | 17 | 448 | 21 |
| 26... | 0130 | 41 | 434 | 48 |
| 26... | 0200 | 74 | 641 | 128 |
| APR , 1986 | | | | |
| 26... | 0330 | 41 | 258 | 29 |
| 26... | 0600 | 9.2 | 80 | 2.0 |
| MAY | | | | |
| 13... | 1520 | 22 | 550 | 33 |
| 13... | 1605 | 42 | 346 | 39 |
| 13... | 1820 | 31 | 117 | 9.8 |
| JUN | | | | |
| 22... | 0130 | 23 | 1410 | 88 |
| 22... | 0200 | 38 | 164 | 17 |
| 22... | 0215 | 47 | 292 | 37 |
| 22... | 0315 | 24 | 114 | 7.4 |
| 22... | 0500 | 11 | 32 | .95 |
| JUL | | | | |
| 08... | 0055 | 22 | 585 | 35 |
| 08... | 0125 | 72 | 234 | 45 |
| 08... | 0155 | 100 | 168 | 45 |
| 08... | 0310 | 42 | 192 | 22 |
| 08... | 0455 | 10 | 30 | .81 |
| 25... | 0125 | 15 | 818 | 33 |
| 25... | 0155 | 69 | 410 | 76 |
| 25... | 0240 | 57 | 222 | 34 |
| 25... | 0440 | 11 | 35 | 1.0 |
| 27... | 2245 | 42 | 835 | 95 |
| 27... | 2315 | 112 | 507 | 153 |
| 27... | 2400 | 64 | 291 | 50 |
| 28... | 0200 | 30 | 94 | 7.6 |
| AUG | | | | |
| 26... | 0735 | 16 | 288 | 12 |
| 26... | 0745 | 163 | 743 | 327 |
| 26... | 0845 | 109 | 387 | 114 |
| 26... | 0930 | 198 | 439 | 235 |
| 26... | 1100 | 70 | 236 | 45 |
| 26... | 1330 | 45 | 108 | 13 |
| SEP | | | | |
| 10... | 1215 | 40 | 113 | 12 |
| 10... | 1216 | 40 | 113 | 12 |
| 10... | 1430 | 51 | 206 | 28 |
| 10... | 1845 | 6.7 | 122 | 2.2 |
| 10... | 1930 | 151 | 714 | 291 |
| 10... | 2100 | 58 | 313 | 49 |
| 29... | 0200 | 11 | 680 | 20 |
| 29... | 0225 | 215 | 1200 | 697 |
| 29... | 0355 | 75 | 279 | 56 |
| 29... | 0525 | 91 | 128 | 31 |
| 29... | 1025 | 15 | 74 | 3.0 |

## 05428000 LAKE MENDOTA AT MADISON, WI

LOCATION.--Lat 43°05'42", long 89°22'12", in SE 1/4 sec.12, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city boat house at dam at outlet, in Madison.

DRAINAGE AREA.--233 mi$^2$. Area of Lake Mendota, 15.2 mi$^2$.

PERIOD OF RECORD.--December 1902 to May 1903, January 1916 to current year (incomplete).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, at datum 7.82 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Estimated daily lake levels: Oct. 31 to Nov. 4, June 21, 22, 28, 29, and July 4, 5, 11, 13, 19, 20, 26, and 27. Lake level regulated by concrete dam with two 12-foot gates and 20-foot lock at outlet. Gage-height telemeter at station.

COOPERATION.--Once-daily lake level readings were provided by Dane County Department of Public Works during June 20 to July 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.01 ft Apr. 5, 1959; minimum observed, 8.02 ft Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.28 ft Nov. 19; minimum, 8.90 ft Feb. 3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.48 | 10.60 | 10.96 | 9.94 | 8.97 | 9.23 | 10.32 | 9.97 | 9.94 | 9.95 | 10.04 | 10.18 |
| 2 | 10.43 | 10.86 | 11.00 | 9.92 | 8.96 | 9.23 | 10.30 | 9.95 | 9.89 | 9.95 | 10.02 | 10.19 |
| 3 | 10.39 | 10.86 | 10.94 | 9.90 | 8.95 | 9.23 | 10.30 | 9.94 | 9.86 | 9.90 | 9.99 | 10.19 |
| 4 | 10.41 | 10.85 | 10.92 | 9.88 | 9.02 | 9.23 | 10.32 | 9.91 | 9.84 | 9.90 | 9.97 | 10.20 |
| 5 | 10.41 | 10.85 | 10.90 | 9.85 | 9.13 | 9.23 | 10.32 | 9.92 | 9.81 | 9.90 | 9.96 | 10.19 |
| 6 | 10.34 | 10.85 | 10.87 | 9.82 | 9.16 | 9.22 | 10.31 | 9.92 | 9.79 | 9.90 | 10.02 | 10.17 |
| 7 | 10.31 | 10.88 | 10.82 | 9.79 | 9.17 | 9.22 | 10.31 | 9.90 | 9.79 | 10.00 | 10.06 | 10.15 |
| 8 | 10.29 | 10.87 | 10.79 | 9.75 | 9.18 | 9.22 | 10.30 | 9.87 | 9.78 | 10.00 | 10.09 | 10.13 |
| 9 | 10.31 | 10.91 | 10.75 | 9.71 | 9.18 | 9.22 | 10.26 | 9.83 | 9.75 | 9.95 | 10.08 | 10.12 |
| 10 | 10.32 | 10.93 | 10.73 | 9.68 | 9.18 | 9.27 | 10.21 | 9.80 | 9.78 | 10.10 | 10.12 | 10.23 |
| 11 | 10.30 | 10.90 | 10.69 | 9.65 | 9.19 | 9.34 | 10.17 | 9.77 | 9.84 | 10.10 | 10.10 | 10.41 |
| 12 | 10.36 | 10.90 | 10.65 | 9.60 | 9.19 | 9.38 | 10.14 | 9.75 | 9.85 | 10.10 | 10.09 | 10.52 |
| 13 | 10.39 | 10.92 | 10.60 | 9.58 | 9.20 | 9.41 | 10.10 | 9.73 | 9.83 | 10.15 | 10.07 | 10.57 |
| 14 | 10.39 | 10.94 | 10.56 | 9.54 | 9.19 | 9.44 | 10.11 | 9.77 | 9.83 | 10.20 | 10.07 | 10.58 |
| 15 | 10.39 | 10.93 | 10.52 | 9.50 | 9.19 | 9.47 | 10.12 | 9.79 | 9.84 | 10.15 | 10.08 | 10.59 |
| 16 | 10.36 | 10.99 | 10.49 | 9.46 | 9.19 | 9.51 | 10.10 | 9.85 | 9.85 | 10.15 | 10.09 | 10.55 |
| 17 | 10.35 | 11.01 | 10.45 | 9.43 | 9.18 | 9.55 | 10.07 | 9.92 | 9.82 | 10.15 | 10.08 | 10.52 |
| 18 | 10.37 | 11.06 | 10.42 | 9.40 | 9.19 | 9.67 | 10.02 | 9.99 | 9.81 | 10.15 | 10.06 | 10.52 |
| 19 | 10.40 | 11.13 | 10.38 | 9.36 | 9.19 | 9.85 | 10.00 | 9.99 | 9.82 | 10.15 | 10.04 | 10.49 |
| 20 | 10.40 | 11.11 | 10.34 | 9.33 | 9.21 | 9.98 | 9.98 | 10.00 | 9.80 | 10.15 | 10.03 | 10.47 |
| 21 | 10.40 | 11.07 | 10.30 | 9.29 | 9.21 | 10.08 | 9.96 | 9.99 | 9.80 | 10.15 | 10.01 | 10.48 |
| 22 | 10.39 | 11.07 | 10.27 | 9.26 | 9.21 | 10.13 | 9.90 | 9.98 | 9.85 | 10.10 | 9.99 | 10.52 |
| 23 | 10.40 | 11.04 | 10.24 | 9.23 | 9.20 | 10.18 | 9.85 | 9.98 | 9.90 | 10.00 | 9.98 | 10.56 |
| 24 | 10.49 | 11.01 | 10.22 | 9.19 | 9.21 | 10.24 | 9.82 | 9.98 | 9.90 | 9.95 | 9.96 | 10.58 |
| 25 | 10.48 | 10.98 | 10.18 | 9.17 | 9.21 | 10.27 | 9.83 | 9.97 | 9.90 | 10.00 | 9.94 | 10.73 |
| 26 | 10.47 | 10.97 | 10.15 | 9.13 | 9.24 | 10.31 | 9.88 | 9.96 | 9.90 | 10.04 | 10.09 | 10.78 |
| 27 | 10.46 | 10.94 | 10.12 | 9.09 | 9.24 | 10.31 | 9.91 | 9.97 | 9.91 | 10.08 | 10.19 | 10.80 |
| 28 | 10.44 | 10.92 | 10.08 | 9.05 | 9.24 | 10.31 | 9.92 | 9.98 | 9.91 | 10.10 | 10.19 | 10.81 |
| 29 | 10.42 | 10.89 | 10.05 | 9.03 | --- | 10.32 | 9.93 | 9.97 | 9.91 | 10.10 | 10.19 | 10.94 |
| 30 | 10.41 | 10.87 | 10.01 | 8.99 | --- | 10.33 | 9.95 | 9.97 | 9.91 | 10.04 | 10.19 | 11.03 |
| 31 | 10.42 | --- | 9.98 | 8.96 | --- | 10.31 | --- | 9.96 | --- | 10.05 | 10.18 | --- |
| MEAN | 10.39 | 10.94 | 10.50 | 9.47 | 9.16 | 9.70 | 10.09 | 9.91 | 9.85 | 10.05 | 10.06 | 10.47 |
| MAX | 10.49 | 11.13 | 11.00 | 9.94 | 9.24 | 10.33 | 10.32 | 10.00 | 9.94 | 10.20 | 10.19 | 11.03 |
| MIN | 10.29 | 10.60 | 9.98 | 8.96 | 8.95 | 9.22 | 9.82 | 9.73 | 9.75 | 9.90 | 9.94 | 10.12 |

WTR YR 1986 MEAN 10.05 MAX 11.13 MIN 8.95

## 05429000 LAKE MONONA AT MADISON, WI

LOCATION.--Lat 43°03'48", long 89°23'49", in SW 1/4 sec.23, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in Brittingham Park, in Madison.

DRAINAGE AREA.--279 mi$^2$. Area of Lake Monona, 5.3 mi$^2$.

PERIOD OF RECORD.--September 1915 to current year (fragmentary) in reports of the Geological Survey. For 1856 to March 1917 in reports of Wisconsin Railroad Commission, volume 19.

REVISED RECORDS.--WSP 1338: Lake area. WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, datum 3.61 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Records good, no estimated daily lake levels. Lake level regulated by concrete dam with four 12-foot stop-log sections and 12-foot lock at outlet of Lake Waubesa. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.27 ft July 28, 1929; minimum observed, 3.22 ft Jan. 20, 1965, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.27 ft Sept. 30; minimum, 4.69 ft Mar. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.66 | 5.94 | 6.01 | 6.02 | 5.70 | 4.80 | 5.29 | 5.03 | 5.05 | 5.02 | 5.31 | 5.35 |
| 2 | 5.66 | 6.08 | 6.03 | 6.01 | 5.64 | 4.78 | 5.31 | 4.97 | 5.05 | 4.99 | 5.26 | 5.34 |
| 3 | 5.66 | 6.09 | 6.01 | 6.03 | 5.58 | 4.77 | 5.34 | 4.93 | 5.05 | 4.99 | 5.21 | 5.34 |
| 4 | 5.67 | 6.07 | 6.03 | 6.03 | 5.59 | 4.76 | 5.36 | 4.90 | 5.07 | 4.98 | 5.18 | 5.32 |
| 5 | 5.66 | 6.04 | 6.04 | 6.03 | 5.65 | 4.76 | 5.38 | 4.89 | 5.09 | 5.00 | 5.15 | 5.29 |
| 6 | 5.66 | 6.04 | 6.03 | 6.02 | 5.60 | 4.73 | 5.36 | 4.90 | 5.09 | 5.00 | 5.22 | 5.26 |
| 7 | 5.67 | 6.03 | 6.05 | 6.02 | 5.54 | 4.71 | 5.35 | 4.90 | 5.07 | 4.99 | 5.23 | 5.23 |
| 8 | 5.69 | 6.01 | 6.06 | 6.02 | 5.48 | 4.71 | 5.33 | 4.93 | 5.07 | 5.08 | 5.22 | 5.20 |
| 9 | 5.76 | 6.02 | 6.07 | 6.00 | 5.42 | 4.70 | 5.32 | 4.95 | 5.07 | 5.12 | 5.20 | 5.22 |
| 10 | 5.83 | 6.02 | 6.09 | 5.99 | 5.37 | 4.76 | 5.33 | 4.98 | 5.10 | 5.20 | 5.21 | 5.38 |
| 11 | 5.84 | 5.98 | 6.08 | 5.98 | 5.32 | 4.84 | 5.34 | 5.00 | 5.14 | 5.35 | 5.19 | 5.62 |
| 12 | 5.94 | 5.96 | 6.08 | 5.97 | 5.26 | 4.87 | 5.36 | 5.04 | 5.13 | 5.38 | 5.19 | 5.66 |
| 13 | 5.96 | 5.97 | 6.08 | 5.96 | 5.22 | 4.89 | 5.37 | 5.06 | 5.13 | 5.37 | 5.19 | 5.67 |
| 14 | 5.94 | 5.95 | 6.07 | 5.96 | 5.17 | 4.92 | 5.42 | 5.03 | 5.15 | 5.38 | 5.22 | 5.68 |
| 15 | 5.92 | 5.95 | 6.06 | 5.96 | 5.13 | 4.94 | 5.45 | 5.03 | 5.18 | 5.40 | 5.23 | 5.67 |
| 16 | 5.89 | 5.98 | 6.07 | 5.95 | 5.09 | 4.97 | 5.44 | 5.03 | 5.17 | 5.42 | 5.23 | 5.68 |
| 17 | 5.86 | 5.97 | 6.07 | 5.95 | 5.04 | 5.02 | 5.44 | 5.09 | 5.18 | 5.42 | 5.24 | 5.71 |
| 18 | 5.86 | 6.06 | 6.06 | 5.94 | 5.01 | 5.14 | 5.45 | 5.14 | 5.17 | 5.43 | 5.24 | 5.74 |
| 19 | 5.88 | 6.11 | 6.06 | 5.93 | 4.98 | 5.27 | 5.43 | 5.11 | 5.16 | 5.43 | 5.23 | 5.78 |
| 20 | 5.86 | 6.10 | 6.06 | 5.92 | 4.97 | 5.29 | 5.42 | 5.08 | 5.16 | 5.41 | 5.23 | 5.81 |
| 21 | 5.83 | 6.10 | 6.06 | 5.91 | 4.96 | 5.29 | 5.39 | 5.06 | 5.13 | 5.40 | 5.23 | 5.89 |
| 22 | 5.81 | 6.09 | 6.05 | 5.89 | 4.94 | 5.28 | 5.38 | 5.04 | 5.20 | 5.39 | 5.22 | 5.91 |
| 23 | 5.83 | 6.06 | 6.05 | 5.87 | 4.91 | 5.25 | 5.37 | 5.02 | 5.18 | 5.38 | 5.20 | 5.94 |
| 24 | 5.89 | 6.03 | 6.06 | 5.85 | 4.88 | 5.23 | 5.35 | 5.01 | 5.15 | 5.37 | 5.19 | 5.95 |
| 25 | 5.87 | 6.02 | 6.06 | 5.84 | 4.86 | 5.23 | 5.29 | 5.01 | 5.11 | 5.45 | 5.19 | 6.12 |
| 26 | 5.85 | 6.00 | 6.06 | 5.80 | 4.87 | 5.25 | 5.29 | 5.01 | 5.08 | 5.44 | 5.37 | 6.13 |
| 27 | 5.81 | 5.97 | 6.06 | 5.81 | 4.84 | 5.25 | 5.24 | 5.01 | 5.13 | 5.41 | 5.45 | 6.12 |
| 28 | 5.78 | 5.95 | 6.05 | 5.80 | 4.82 | 5.26 | 5.19 | 5.00 | 5.12 | 5.45 | 5.41 | 6.11 |
| 29 | 5.75 | 5.93 | 6.04 | 5.79 | --- | 5.26 | 5.13 | 5.00 | 5.09 | 5.43 | 5.39 | 6.20 |
| 30 | 5.72 | 5.93 | 6.04 | 5.77 | --- | 5.26 | 5.11 | 5.00 | 5.06 | 5.40 | 5.37 | 6.25 |
| 31 | 5.71 | --- | 6.02 | 5.74 | --- | 5.25 | --- | 5.02 | --- | 5.36 | 5.36 | --- |
| MEAN | 5.80 | 6.02 | 6.05 | 5.93 | 5.21 | 5.01 | 5.34 | 5.01 | 5.12 | 5.29 | 5.25 | 5.69 |
| MAX | 5.96 | 6.11 | 6.09 | 6.03 | 5.70 | 5.29 | 5.45 | 5.14 | 5.20 | 5.45 | 5.45 | 6.25 |
| MIN | 5.66 | 5.93 | 6.01 | 5.74 | 4.82 | 4.70 | 5.11 | 4.89 | 5.05 | 4.98 | 5.15 | 5.20 |

CAL YR 1985 MEAN 5.53 MAX 6.11 MIN 4.84
WTR YR 1986 MEAN 5.48 MAX 6.25 MIN 4.70

## 05429500 YAHARA RIVER NEAR MCFARLAND, WI

LOCATION.--Lat 43°00'32", long 89°18'18", in SW 1/4 sec.3, T.6 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank just upstream from bridge on U.S. Highway 51, at dam at outlet of Lake Waubesa and 1.0 mi southwest of McFarland.

DRAINAGE AREA.--327 $mi^2$.

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 805, WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). September 1930 to Dec. 22, 1934, nonrecording gage at same site at datum 0.40 ft higher. Dec. 23, 1934 to Sept. 30, 1982, recording gage at same site at datum 0.40 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 55 $ft^3$/s of effluent into the Badfish Creek basin during 1986 water year. The data were provided by the Madison Metropolitan Sewerage District. Prior to 1958 the effluent was discharged into the Yahara River above Mc Farland. Gage-height telemeter at station for Lake Waubesa stage.

AVERAGE DISCHARGE.--56 years, 157 $ft^3$/s, 6.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 $ft^3$/s Apr. 10, 1959, gage height, 5.82 ft; maximum gage height, 6.33 ft July 23, 24, 1950, backwater from aquatic vegetation; minimum discharge, 1.0 $ft^3$/s Oct. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 415 $ft^3$/s Feb. 5, gage height, 5.33 ft; maximum gage height, 5.94 ft Sept. 30, backwater from aquatic vegetation; minimum, 71 $ft^3$/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 194 | 315 | 358 | 364 | 410 | 248 | 346 | 278 | 166 | 95 | 151 | 109 |
| 2 | 192 | 366 | 386 | 364 | 402 | 242 | 345 | 262 | 163 | 92 | 142 | 110 |
| 3 | 193 | 371 | 372 | 366 | 392 | 236 | 347 | 244 | 160 | 88 | 131 | 110 |
| 4 | 204 | 368 | 361 | 366 | 397 | 232 | 354 | 227 | 159 | 81 | 122 | 114 |
| 5 | 214 | 362 | 355 | 367 | 412 | 229 | 363 | 214 | 157 | 79 | 113 | 111 |
| 6 | 209 | 357 | 355 | 363 | 404 | 225 | 363 | 210 | 157 | 80 | 119 | 104 |
| 7 | 206 | 360 | 357 | 360 | 392 | 225 | 360 | 206 | 159 | 83 | 120 | 98 |
| 8 | 202 | 353 | 362 | 355 | 379 | 215 | 357 | 201 | 156 | 93 | 120 | 93 |
| 9 | 221 | 358 | 366 | 352 | 368 | 208 | 352 | 198 | 151 | 100 | 115 | 91 |
| 10 | 243 | 359 | 372 | 357 | 358 | 218 | 347 | 197 | 152 | 109 | 115 | 122 |
| 11 | 248 | 349 | 376 | 361 | 347 | 237 | 343 | 200 | 160 | 137 | 112 | 170 |
| 12 | 279 | 342 | 377 | 367 | 336 | 244 | 343 | 206 | 163 | 156 | 104 | 189 |
| 13 | 295 | 343 | 381 | 368 | 327 | 251 | 346 | 211 | 156 | 164 | 96 | 191 |
| 14 | 295 | 348 | 383 | 370 | 320 | 258 | 353 | 213 | 155 | 165 | 96 | 192 |
| 15 | 292 | 342 | 384 | 373 | 312 | 266 | 366 | 211 | 157 | 166 | 99 | 193 |
| 16 | 285 | 348 | 389 | 376 | 305 | 272 | 370 | 216 | 156 | 171 | 98 | 193 |
| 17 | 276 | 346 | 388 | 381 | 298 | 285 | 368 | 224 | 151 | 171 | 97 | 194 |
| 18 | 277 | 361 | 386 | 384 | 293 | 311 | 363 | 235 | 146 | 170 | 96 | 203 |
| 19 | 283 | 377 | 384 | 386 | 289 | 348 | 360 | 228 | 143 | 171 | 93 | 210 |
| 20 | 282 | 379 | 383 | 385 | 288 | 357 | 360 | 217 | 134 | 171 | 90 | 217 |
| 21 | 278 | 373 | 381 | 383 | 291 | 354 | 360 | 208 | 124 | 166 | 88 | 236 |
| 22 | 274 | 369 | 382 | 382 | 285 | 347 | 355 | 198 | 137 | 162 | 84 | 252 |
| 23 | 274 | 363 | 382 | 379 | 279 | 346 | 347 | 192 | 137 | 157 | 83 | 260 |
| 24 | 296 | 360 | 383 | 377 | 274 | 343 | 339 | 185 | 128 | 152 | 78 | 267 |
| 25 | 295 | 352 | 379 | 379 | 270 | 338 | 333 | 179 | 116 | 165 | 74 | 299 |
| 26 | 288 | 350 | 379 | 384 | 269 | 344 | 342 | 176 | 105 | 167 | 94 | 309 |
| 27 | 283 | 347 | 378 | 403 | 264 | 345 | 327 | 174 | 109 | 162 | 115 | 310 |
| 28 | 277 | 340 | 375 | 402 | 256 | 345 | 310 | 173 | 110 | 172 | 113 | 313 |
| 29 | 270 | 342 | 372 | 406 | --- | 345 | 296 | 169 | 105 | 169 | 111 | 331 |
| 30 | 264 | 342 | 370 | 405 | --- | 346 | 287 | 168 | 100 | 164 | 108 | 346 |
| 31 | 263 | --- | 368 | 405 | --- | 340 | --- | 167 | --- | 159 | 107 | --- |
| TOTAL | 7952 | 10642 | 11624 | 11670 | 9217 | 8900 | 10402 | 6387 | 4272 | 4337 | 3284 | 5937 |
| MEAN | 257 | 355 | 375 | 376 | 329 | 287 | 347 | 206 | 142 | 140 | 106 | 198 |
| MAX | 296 | 379 | 389 | 406 | 412 | 357 | 370 | 278 | 166 | 172 | 151 | 346 |
| MIN | 192 | 315 | 355 | 352 | 256 | 208 | 287 | 167 | 100 | 79 | 74 | 91 |
| CFSM | .79 | 1.09 | 1.15 | 1.15 | 1.01 | .88 | 1.06 | .63 | .43 | .43 | .32 | .61 |
| IN. | .90 | 1.21 | 1.32 | 1.33 | 1.05 | 1.01 | 1.18 | .73 | .49 | .49 | .37 | .68 |

CAL YR 1985 TOTAL 89129 MEAN 244 MAX 417 MIN 40 CFSM .75 IN 10.14
WTR YR 1986 TOTAL 94624 MEAN 259 MAX 412 MIN 74 CFSM .79 IN 10.76

## 05430095 BADFISH CREEK AT COUNTY HIGHWAY A NEAR STOUGHTON, WI

LOCATION.--Lat 42°53'37", long 89°17'55", in NW 1/4 SE 1/4 sec.15, T.5 N., R.10 E., Dane County, Hydrologic Unit 07090001, on right bank 75 ft upstream from bridge on County Highway A, 4.4 mi southwest of Stoughton, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--41.9 mi$^2$, of which 1.5 mi$^2$ is noncontributing.

PERIOD OF RECORD.--May 1956 to September 1966, December 1985 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 873.05 ft above National Geodetic Vertical Datum of 1929. May 1956 to September 1966, site 0.5 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 1-5, Mar. 26 to Apr. 1, and June 16. Records are fair. Approximately 73 percent of flow is effluent from Nine Springs treatment plant. (Data provided by Madison Metropolitan Sewerage District.) The Sewerage District began discharging into the basin in December 1958.

AVERAGE DISCHARGE.--7 years (1959-66), 52.5 ft$^3$/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 871 ft$^3$/s Jan. 13, 1960, gage height, 4.60 ft; minimum, 3.4 ft$^3$/s Nov. 26, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 272 ft$^3$/s Sept. 28, gage height, 4.91 ft; minimum daily, 69 ft$^3$/s Dec. 29 and May 26.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 25 to July 4, and Aug. 27-30.)

| | | | |
|---|---|---|---|
| 3.2 | 65 | 4.0 | 153 |
| 3.5 | 91 | 4.5 | 222 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 86 | 70 | 77 | 76 | 98 | 87 | 70 | 73 | 78 | 79 |
| 2 | | | 90 | 70 | 77 | 77 | 98 | 84 | 71 | 74 | 76 | 84 |
| 3 | | | 88 | 72 | 78 | 80 | 100 | 81 | 73 | 73 | 73 | 84 |
| 4 | | | 86 | 71 | 94 | 83 | 100 | 79 | 75 | 72 | 74 | 84 |
| 5 | | | 86 | 70 | 102 | 86 | 105 | 82 | 74 | 70 | 75 | 83 |
| 6 | | | 84 | 71 | 87 | 86 | 97 | 82 | 74 | 71 | 81 | 79 |
| 7 | | | 82 | 72 | 84 | 84 | 97 | 81 | 73 | 72 | 78 | 76 |
| 8 | | | 79 | 73 | 81 | 81 | 96 | 80 | 71 | 78 | 78 | 78 |
| 9 | | | 80 | 75 | 78 | 81 | 95 | 79 | 71 | 75 | 75 | 83 |
| 10 | | | 80 | 76 | 79 | 159 | 92 | 76 | 75 | 78 | 74 | 103 |
| 11 | | | 78 | 75 | 78 | 130 | 95 | 75 | 75 | 83 | 74 | 107 |
| 12 | | | 78 | 74 | 77 | 109 | 94 | 77 | 74 | 79 | 74 | 89 |
| 13 | | | 76 | 76 | 75 | 116 | 91 | 78 | 73 | 76 | 74 | 80 |
| 14 | | | 73 | 77 | 75 | 132 | 102 | 79 | 73 | 78 | 76 | 77 |
| 15 | | | 73 | 76 | 73 | 121 | 101 | 80 | 71 | 82 | 75 | 77 |
| 16 | | | 73 | 75 | 72 | 133 | 97 | 81 | 72 | 84 | 72 | 77 |
| 17 | | | 74 | 77 | 74 | 139 | 96 | 94 | 73 | 83 | 70 | 77 |
| 18 | | | 74 | 78 | 74 | 184 | 95 | 90 | 73 | 84 | 71 | 78 |
| 19 | | | 74 | 76 | 76 | 162 | 93 | 79 | 74 | 81 | 72 | 76 |
| 20 | | | 75 | 78 | 78 | 112 | 90 | 77 | 74 | 78 | 72 | 74 |
| 21 | | | 74 | 80 | 78 | 102 | 93 | 74 | 72 | 81 | 73 | 80 |
| 22 | | | 72 | 79 | 77 | 98 | 93 | 74 | 75 | 82 | 73 | 83 |
| 23 | | | 74 | 79 | 74 | 95 | 93 | 74 | 75 | 82 | 71 | 93 |
| 24 | | | 74 | 80 | 76 | 96 | 92 | 72 | 77 | 82 | 70 | 82 |
| 25 | | | 70 | 78 | 78 | 95 | 91 | 70 | 77 | 90 | 74 | 135 |
| 26 | | | 70 | 77 | 78 | 98 | 98 | 69 | 81 | 79 | 97 | 91 |
| 27 | | | 72 | 79 | 77 | 96 | 87 | 75 | 92 | 76 | 94 | 84 |
| 28 | | | 71 | 79 | 77 | 94 | 88 | 74 | 85 | 82 | 90 | 118 |
| 29 | | | 69 | 78 | --- | 92 | 88 | 74 | 81 | 80 | 88 | 178 |
| 30 | | | 71 | 78 | --- | 90 | 91 | 73 | 78 | 80 | 83 | 126 |
| 31 | | | 71 | 78 | --- | 96 | --- | 72 | --- | 79 | 80 | --- |
| TOTAL | | | 2377 | 2347 | 2204 | 3283 | 2846 | 2422 | 2252 | 2437 | 2385 | 2715 |
| MEAN | | | 76.7 | 75.7 | 78.7 | 106 | 94.9 | 78.1 | 75.1 | 78.6 | 76.9 | 90.5 |
| MAX | | | 90 | 80 | 102 | 184 | 105 | 94 | 92 | 90 | 97 | 178 |
| MIN | | | 69 | 70 | 72 | 76 | 87 | 69 | 70 | 70 | 70 | 74 |

## 05430150 BADFISH CREEK NEAR COOKSVILLE, WI

**LOCATION.**--Lat 42°50'00", long 89°11'48", in SW 1/4 SE 1/4 sec.4, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 20 ft upstream from bridge on State Highway 59, 2.2 mi east of Cooksville, and 2.2 mi above the mouth.

**DRAINAGE AREA.**--82.6 mi$^2$.

**PERIOD OF RECORD.**--July 1977 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 810 ft, from topographic map.

**REMARKS.**--Estimated daily discharges: Feb. 19 to Mar. 12, and ice periods listed in rating tables below. Records good except for estimated daily discharges, which are fair. Approximately 51 percent of flow is effluent from Nine Springs treatment plant. (Data provided by Madison Metropolitan Sewerage District.)

**AVERAGE DISCHARGE.**--9 years, 103 ft$^3$/s.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 870 ft$^3$/s Sept. 1, 1981, gage height, 8.11 ft; minimum daily, 35 ft$^3$/s Aug. 1, 1977.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 460 ft$^3$/s Nov. 2, gage height, 6.59 ft; minimum daily, 82 ft$^3$/s Sept. 1.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 14, 18-20, 24-30, Jan. 6-9, and 27-29.)

| | | | |
|---|---|---|---|
| 4.6 | 72 | 6.0 | 329 |
| 5.0 | 143 | 7.0 | 548 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 95 | 305 | 134 | 93 | 98 | 110 | 140 | 106 | 94 | 100 | 107 | 82 |
| 2 | 91 | 337 | 135 | 95 | 96 | 110 | 134 | 99 | 94 | 99 | 104 | 88 |
| 3 | 89 | 190 | 130 | 99 | 101 | 110 | 142 | 96 | 99 | 100 | 100 | 94 |
| 4 | 102 | 161 | 126 | 94 | 140 | 110 | 147 | 92 | 100 | 90 | 97 | 94 |
| 5 | 97 | 148 | 122 | 93 | 189 | 120 | 150 | 97 | 94 | 85 | 104 | 91 |
| 6 | 89 | 141 | 120 | 94 | 149 | 120 | 136 | 100 | 96 | 90 | 120 | 87 |
| 7 | 86 | 156 | 115 | 96 | 139 | 120 | 133 | 96 | 97 | 91 | 116 | 84 |
| 8 | 102 | 136 | 112 | 98 | 130 | 110 | 128 | 94 | 91 | 110 | 111 | 86 |
| 9 | 125 | 144 | 113 | 98 | 123 | 110 | 127 | 93 | 91 | 103 | 103 | 104 |
| 10 | 138 | 150 | 117 | 97 | 121 | 270 | 120 | 90 | 106 | 106 | 99 | 185 |
| 11 | 113 | 137 | 114 | 96 | 119 | 230 | 120 | 89 | 109 | 122 | 99 | 189 |
| 12 | 188 | 146 | 113 | 96 | 115 | 200 | 116 | 93 | 96 | 110 | 104 | 135 |
| 13 | 147 | 180 | 109 | 98 | 114 | 216 | 114 | 96 | 93 | 98 | 102 | 111 |
| 14 | 109 | 183 | 110 | 99 | 114 | 255 | 137 | 106 | 98 | 91 | 118 | 101 |
| 15 | 105 | 158 | 104 | 100 | 114 | 230 | 143 | 109 | 98 | 101 | 112 | 103 |
| 16 | 105 | 185 | 106 | 100 | 106 | 243 | 130 | 118 | 96 | 119 | 106 | 104 |
| 17 | 101 | 161 | 107 | 104 | 109 | 259 | 125 | 145 | 93 | 117 | 101 | 111 |
| 18 | 104 | 215 | 100 | 103 | 112 | 322 | 121 | 174 | 93 | 118 | 95 | 120 |
| 19 | 120 | 219 | 100 | 97 | 110 | 307 | 117 | 122 | 93 | 117 | 97 | 111 |
| 20 | 105 | 167 | 100 | 96 | 110 | 207 | 114 | 113 | 100 | 110 | 95 | 107 |
| 21 | 104 | 146 | 98 | 103 | 110 | 178 | 115 | 105 | 96 | 109 | 95 | 131 |
| 22 | 105 | 140 | 97 | 105 | 110 | 162 | 115 | 108 | 107 | 113 | 94 | 130 |
| 23 | 112 | 130 | 100 | 101 | 100 | 159 | 114 | 104 | 96 | 114 | 91 | 166 |
| 24 | 190 | 123 | 100 | 103 | 110 | 151 | 115 | 102 | 101 | 116 | 86 | 137 |
| 25 | 129 | 124 | 98 | 95 | 110 | 152 | 114 | 99 | 99 | 145 | 90 | 255 |
| 26 | 113 | 128 | 98 | 95 | 110 | 158 | 126 | 92 | 106 | 122 | 133 | 162 |
| 27 | 102 | 125 | 100 | 96 | 110 | 144 | 108 | 101 | 169 | 116 | 113 | 139 |
| 28 | 100 | 119 | 98 | 98 | 110 | 140 | 106 | 104 | 119 | 123 | 97 | 156 |
| 29 | 102 | 110 | 94 | 96 | --- | 136 | 105 | 101 | 104 | 115 | 96 | 365 |
| 30 | 100 | 111 | 98 | 97 | --- | 132 | 116 | 99 | 98 | 110 | 89 | 244 |
| 31 | 105 | --- | 99 | 99 | --- | 129 | --- | 99 | --- | 106 | 84 | --- |
| TOTAL | 3473 | 4875 | 3367 | 3034 | 3279 | 5400 | 3728 | 3242 | 3026 | 3366 | 3158 | 4072 |
| MEAN | 112 | 163 | 109 | 97.9 | 117 | 174 | 124 | 105 | 101 | 109 | 102 | 136 |
| MAX | 190 | 337 | 135 | 105 | 189 | 322 | 150 | 174 | 169 | 145 | 133 | 365 |
| MIN | 86 | 110 | 94 | 93 | 96 | 110 | 105 | 89 | 91 | 85 | 84 | 82 |

CAL YR 1985 TOTAL 42223 MEAN 116 MAX 524 MIN 75
WTR YR 1986 TOTAL 44020 MEAN 121 MAX 365 MIN 82

## 05430175 YAHARA RIVER NEAR FULTON, WI

LOCATION.--Lat 42°49'50", long 89°10'09", in NE 1/4 NE 1/4 sec.10, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 700 ft downstream from Badfish Creek, 2,000 ft upstream from bridge on State Highway 59, and 2.8 mi northwest of Fulton.

DRAINAGE AREA.--517 mi$^2$.

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 792.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating tables below. Records good except for ice-affected periods, which are fair. Diurnal fluctuation caused by powerplant at Stebbensville 1.5 mi upstream, and additional regulation from other dams and powerplants upstream.

AVERAGE DISCHARGE.--9 years, 374 ft$^3$/s, 9.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft$^3$/s Sept. 1, 1981, gage height, 8.36 ft; minimum daily, 60 ft$^3$/s Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft$^3$/s Nov. 2, gage height, 5.69 ft; maximum gage height, 6.16 ft Dec. 26, backwater from ice; minimum daily, 129 ft$^3$/s Sept. 1, 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13 to Jan. 16, and Jan. 26, 27.)

| | | | |
|---|---|---|---|
| 3.1 | 111 | 4.5 | 561 |
| 3.5 | 210 | 5.0 | 796 |
| 4.0 | 366 | 6.0 | 1,410 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 369 | 807 | 634 | 500 | 588 | 441 | 635 | 576 | 371 | 279 | 286 | 129 |
| 2 | 285 | 995 | 629 | 500 | 575 | 471 | 646 | 567 | 376 | 299 | 295 | 172 |
| 3 | 359 | 707 | 618 | 520 | 580 | 476 | 663 | 560 | 354 | 308 | 313 | 173 |
| 4 | 340 | 712 | 576 | 500 | 651 | 483 | 689 | 544 | 228 | 360 | 290 | 218 |
| 5 | 353 | 697 | 574 | 500 | 737 | 493 | 646 | 479 | 268 | 264 | 292 | 278 |
| 6 | 281 | 693 | 581 | 500 | 695 | 489 | 607 | 459 | 281 | 284 | 310 | 214 |
| 7 | 342 | 714 | 573 | 500 | 680 | 423 | 605 | 481 | 280 | 277 | 309 | 129 |
| 8 | 400 | 695 | 570 | 500 | 664 | 392 | 633 | 474 | 274 | 320 | 321 | 223 |
| 9 | 400 | 710 | 572 | 500 | 658 | 469 | 638 | 473 | 214 | 290 | 282 | 300 |
| 10 | 404 | 719 | 578 | 500 | 653 | 781 | 641 | 442 | 153 | 299 | 257 | 388 |
| 11 | 392 | 696 | 592 | 500 | 647 | 699 | 575 | 423 | 250 | 323 | 302 | 461 |
| 12 | 518 | 648 | 530 | 500 | 634 | 674 | 486 | 437 | 193 | 345 | 283 | 402 |
| 13 | 495 | 773 | 520 | 500 | 628 | 687 | 563 | 389 | 199 | 299 | 279 | 492 |
| 14 | 451 | 737 | 520 | 500 | 587 | 754 | 605 | 390 | 178 | 274 | 247 | 402 |
| 15 | 451 | 700 | 520 | 500 | 559 | 713 | 628 | 407 | 180 | 329 | 317 | 384 |
| 16 | 479 | 728 | 520 | 500 | 553 | 733 | 630 | 340 | 248 | 342 | 162 | 425 |
| 17 | 447 | 704 | 520 | 509 | 555 | 787 | 623 | 378 | 299 | 347 | 255 | 470 |
| 18 | 450 | 860 | 520 | 534 | 538 | 899 | 609 | 510 | 279 | 272 | 194 | 453 |
| 19 | 511 | 887 | 500 | 575 | 537 | 894 | 602 | 486 | 251 | 359 | 247 | 443 |
| 20 | 495 | 788 | 500 | 575 | 548 | 752 | 591 | 415 | 269 | 351 | 208 | 443 |
| 21 | 468 | 665 | 500 | 576 | 535 | 722 | 588 | 419 | 247 | 307 | 204 | 470 |
| 22 | 441 | 703 | 500 | 618 | 529 | 722 | 589 | 406 | 247 | 337 | 213 | 473 |
| 23 | 472 | 648 | 500 | 625 | 523 | 716 | 587 | 403 | 291 | 396 | 174 | 546 |
| 24 | 568 | 641 | 500 | 626 | 526 | 761 | 590 | 447 | 294 | 373 | 162 | 652 |
| 25 | 509 | 647 | 490 | 616 | 524 | 775 | 587 | 415 | 265 | 342 | 155 | 944 |
| 26 | 515 | 652 | 500 | 600 | 517 | 770 | 599 | 388 | 286 | 299 | 170 | 721 |
| 27 | 494 | 636 | 520 | 600 | 490 | 722 | 567 | 419 | 408 | 287 | 158 | 583 |
| 28 | 487 | 626 | 520 | 588 | 459 | 707 | 561 | 426 | 293 | 353 | 142 | 636 |
| 29 | 500 | 595 | 500 | 532 | --- | 689 | 576 | 419 | 302 | 374 | 266 | 1070 |
| 30 | 494 | 543 | 520 | 592 | --- | 595 | 594 | 398 | 299 | 301 | 180 | 875 |
| 31 | 499 | --- | 520 | 601 | --- | 613 | --- | 382 | --- | 321 | 215 | --- |
| TOTAL | 13669 | 21326 | 16717 | 16787 | 16370 | 20302 | 18153 | 13752 | 8077 | 9911 | 7488 | 13569 |
| MEAN | 441 | 711 | 539 | 542 | 585 | 655 | 605 | 444 | 269 | 320 | 242 | 452 |
| MAX | 568 | 995 | 634 | 626 | 737 | 899 | 689 | 576 | 408 | 396 | 321 | 1070 |
| MIN | 281 | 543 | 490 | 500 | 459 | 392 | 486 | 340 | 153 | 264 | 142 | 129 |
| CFSM | .85 | 1.38 | 1.04 | 1.05 | 1.13 | 1.27 | 1.17 | .86 | .52 | .62 | .47 | .87 |
| IN. | .98 | 1.53 | 1.20 | 1.21 | 1.18 | 1.46 | 1.31 | .99 | .58 | .71 | .54 | .96 |

CAL YR 1985 TOTAL 166042 MEAN 455 MAX 1300 MIN 124 CFSM .88 IN 11.95
WTR YR 1986 TOTAL 176121 MEAN 483 MAX 1070 MIN 129 CFSM .93 IN 12.67

## 05430500 ROCK RIVER AT AFTON, WI

LOCATION.--Lat 42°36'33", long 89°04'14", in NE 1/4 sec.28, T.2 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank in Afton, 0.3 mi downstream from highway bridge and 1.1 mi upstream from Bass Creek.

DRAINAGE AREA.--3,340 mi$^2$.

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January 1914, published in WSP 1308.

REVISED RECORDS.--WSP 1238: 1916(M), 1919(M), 1933, 1937-38, 1943. WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 742.36 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 21, 1932, a nonrecording gage, and Aug. 21, 1932, to Sept. 30, 1933, water-stage recorder, at same site at datum 1 ft higher.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records are good except those for ice-affected periods, which are fair. Diurnal fluctuation caused by powerplants above station.

AVERAGE DISCHARGE.--72 years, 1,849 ft$^3$/s, 7.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft$^3$/s Mar. 23, 24, 1929, gage height, 11.81 ft present datum; maximum gage height observed, 13.05 ft Feb. 5, 1916, present datum (backwater from ice); minimum discharge, 22 ft$^3$/s Sept. 9, 1964; minimum daily, 42 ft$^3$/s Aug. 25, 26, 1934; minimum gage height, 0.09 ft Aug. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,290 ft$^3$/s Mar. 27, gage height, 10.58 ft; minimum daily, 1,380 ft$^3$/s June 12 and 13.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Dec. 1-5, Dec. 13 to Jan. 19, Jan. 27 to Feb. 2, and Feb. 11-17.)

| | | | |
|---|---|---|---|
| 3.0 | 740 | 8.0 | 5,480 |
| 4.0 | 1,440 | 10.0 | 8,360 |
| 6.0 | 3,160 | 11.0 | 10,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1850 | 3980 | 6000 | 3100 | 2600 | 2620 | 9000 | 4040 | 2150 | 2380 | 2640 | 2070 |
| 2 | 1870 | 4460 | 5800 | 3100 | 2600 | 2600 | 8910 | 4020 | 2140 | 2470 | 2500 | 2100 |
| 3 | 1820 | 4470 | 5600 | 3100 | 2520 | 2560 | 8870 | 3910 | 1940 | 2530 | 2460 | 2140 |
| 4 | 1940 | 4500 | 5400 | 3000 | 2880 | 2510 | 8770 | 3700 | 1820 | 2510 | 2340 | 2100 |
| 5 | 1840 | 4750 | 5400 | 2900 | 3080 | 2570 | 8510 | 3450 | 1840 | 2450 | 2190 | 2090 |
| 6 | 1900 | 4920 | 5340 | 2800 | 3020 | 2530 | 8120 | 3380 | 1550 | 2490 | 2290 | 2100 |
| 7 | 1870 | 5110 | 5320 | 2700 | 2970 | 2430 | 7960 | 3380 | 1510 | 2480 | 2290 | 2090 |
| 8 | 1880 | 5250 | 5290 | 2600 | 2930 | 2460 | 7820 | 3380 | 1490 | 2480 | 2300 | 1950 |
| 9 | 2200 | 5580 | 5200 | 2600 | 2960 | 2520 | 7700 | 3250 | 1510 | 2550 | 2290 | 2060 |
| 10 | 2270 | 5830 | 5150 | 2600 | 2950 | 3840 | 7480 | 3110 | 1450 | 2440 | 2290 | 2450 |
| 11 | 2230 | 5740 | 5060 | 2600 | 3100 | 3920 | 7210 | 2940 | 1400 | 2500 | 2280 | 2580 |
| 12 | 2440 | 5650 | 4870 | 2600 | 3100 | 3820 | 6940 | 2760 | 1380 | 2450 | 2260 | 2790 |
| 13 | 2650 | 5730 | 4800 | 2600 | 3100 | 4160 | 6720 | 2690 | 1380 | 2390 | 2150 | 3150 |
| 14 | 2640 | 5880 | 4600 | 2500 | 3100 | 4800 | 6660 | 2630 | 1470 | 2410 | 2190 | 3550 |
| 15 | 2700 | 5920 | 4500 | 2400 | 3000 | 5080 | 6420 | 2570 | 1490 | 2670 | 2060 | 3900 |
| 16 | 2800 | 6040 | 4400 | 2500 | 3000 | 5450 | 6310 | 2550 | 1490 | 2960 | 2160 | 4180 |
| 17 | 2810 | 5950 | 4300 | 2500 | 3000 | 5920 | 6120 | 2620 | 1580 | 3130 | 2030 | 4470 |
| 18 | 2840 | 6460 | 4000 | 2500 | 2930 | 6470 | 5870 | 2850 | 1610 | 3260 | 2090 | 4740 |
| 19 | 2950 | 6800 | 3900 | 2500 | 2880 | 7130 | 5520 | 2900 | 1590 | 3310 | 1980 | 4930 |
| 20 | 3030 | 6500 | 3800 | 2520 | 2890 | 7490 | 5470 | 2830 | 1600 | 3450 | 1890 | 5070 |
| 21 | 3050 | 6840 | 3700 | 2500 | 2880 | 7770 | 5440 | 2730 | 1580 | 3520 | 1810 | 5310 |
| 22 | 3090 | 6990 | 3700 | 2460 | 2820 | 8070 | 5260 | 2700 | 1560 | 3440 | 1770 | 5330 |
| 23 | 3070 | 6980 | 3700 | 2520 | 2780 | 8400 | 5010 | 2690 | 1550 | 3390 | 1670 | 5510 |
| 24 | 3310 | 6890 | 3700 | 2540 | 2820 | 8650 | 4810 | 2670 | 1600 | 3330 | 1620 | 5810 |
| 25 | 3260 | 6910 | 3500 | 2520 | 2760 | 8900 | 4740 | 2660 | 1600 | 3300 | 1550 | 6630 |
| 26 | 3230 | 6770 | 3300 | 2500 | 2780 | 9130 | 4670 | 2640 | 1470 | 3260 | 1660 | 6860 |
| 27 | 3270 | 6630 | 3300 | 2500 | 2740 | 9250 | 4480 | 2620 | 1600 | 3030 | 1750 | 7030 |
| 28 | 3320 | 6530 | 3200 | 2600 | 2580 | 9260 | 4260 | 2560 | 1830 | 2940 | 1650 | 7190 |
| 29 | 3340 | 6390 | 3200 | 2600 | --- | 9260 | 4100 | 2500 | 1870 | 2930 | 1760 | 8030 |
| 30 | 3330 | 6060 | 3100 | 2600 | --- | 9190 | 4220 | 2400 | 2240 | 2820 | 1950 | 8450 |
| 31 | 3380 | --- | 3100 | 2600 | --- | 9060 | --- | 2280 | --- | 2730 | 1970 | --- |
| TOTAL | 82180 | 176510 | 136230 | 81660 | 80770 | 177820 | 193370 | 91410 | 49290 | 88000 | 63840 | 126660 |
| MEAN | 2651 | 5884 | 4395 | 2634 | 2885 | 5736 | 6446 | 2949 | 1643 | 2839 | 2059 | 4222 |
| MAX | 3380 | 6990 | 6000 | 3100 | 3100 | 9260 | 9000 | 4040 | 2240 | 3520 | 2640 | 8450 |
| MIN | 1820 | 3980 | 3100 | 2400 | 2520 | 2430 | 4100 | 2280 | 1380 | 2380 | 1550 | 1950 |
| CFSM | .79 | 1.76 | 1.32 | .79 | .86 | 1.72 | 1.93 | .88 | .49 | .85 | .62 | 1.26 |
| IN. | .92 | 1.97 | 1.52 | .91 | .90 | 1.98 | 2.15 | 1.02 | .55 | .98 | .71 | 1.41 |

CAL YR 1985 TOTAL 1132735 MEAN 3103 MAX 7710 MIN 358 CFSM .93 IN 12.62
WTR YR 1986 TOTAL 1347740 MEAN 3692 MAX 9260 MIN 1380 CFSM 1.11 IN 15.01

## 05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI

LOCATION.--Lat 42$^\circ$31'18", long 88$^\circ$30'59", in SW 1/4 SW 1/4 sec.8, T.2 N., R.17 E., Walworth County, Hydrologic Unit 07090001, on left bank 5 ft upstream of Petrie Road bridge, 2.5 mi upstream from Delavan Lake inlet at Mounds Road, and 2.5 mi southeast of Elkhorn.

DRAINAGE AREA.--8.96 mi$^2$.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 960 ft, from topographic map.

REMARKS.--Estimated daily discharges: None, except those for ice period listed below. Records good except for ice-affected period, which is fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 359 ft$^3$/s Mar. 10, 1986, gage height, 8.84 ft; minimum daily, 0.07 ft$^3$/s, Sept. 23, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 359 ft$^3$/s Mar. 10, gage height, 8.84 ft; minimum daily, 0.14 ft$^3$/s, Sept. 8.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 7 to Mar. 9.)

| Oct. 1 to Mar. 7 | | | | Mar. 8 to Sept. 30 | | | |
|---|---|---|---|---|---|---|---|
| 5.0 | .12 | 6.1 | 11 | 5.0 | .12 | 6.3 | 14 |
| 5.1 | .28 | 6.3 | 14 | 5.1 | .38 | 6.5 | 19 |
| 5.2 | .61 | 6.5 | 19 | 5.2 | .61 | 6.7 | 26 |
| 5.3 | 1.2 | 6.7 | 26 | 5.3 | 1.2 | 7.0 | 46 |
| 5.5 | 3.2 | 7.0 | 46 | 5.5 | 3.2 | 7.5 | 96 |
| 5.7 | 5.4 | 7.5 | 89 | 5.7 | 5.4 | 8.0 | 170 |
| 5.9 | 7.8 | 8.0 | 137 | 5.9 | 7.8 | 8.6 | 298 |
| | | | | 6.1 | 11 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .16 | 71 | 82 | .98 | 1.9 | 1.9 | 4.5 | 1.4 | 1.2 | 9.7 | .52 | .29 |
| 2 | .15 | 93 | 52 | .94 | 2.5 | 2.0 | 3.8 | .84 | .75 | 8.3 | .43 | .24 |
| 3 | .15 | 33 | 21 | .90 | 2.3 | 1.9 | 4.1 | .69 | .66 | 6.7 | .35 | .22 |
| 4 | .62 | 17 | 14 | .88 | 30 | 2.0 | 4.3 | .78 | .68 | 5.7 | .28 | .20 |
| 5 | 1.1 | 12 | 11 | .86 | 27 | 2.1 | 4.0 | .84 | 4.0 | 4.7 | .26 | .17 |
| 6 | .50 | 10 | 9.1 | .84 | 12 | 1.9 | 3.7 | .74 | 4.1 | 4.7 | 3.0 | .16 |
| 7 | .32 | 11 | 8.0 | .82 | 8.0 | 1.7 | 3.2 | .53 | 3.1 | 18 | 5.1 | .15 |
| 8 | .63 | 9.2 | 7.0 | .80 | 5.0 | 1.6 | 2.8 | .42 | 2.1 | 13 | 3.4 | .14 |
| 9 | 7.2 | 15 | 6.0 | .80 | 4.0 | 25 | 2.4 | .41 | 1.4 | 12 | 2.3 | .21 |
| 10 | 13 | 37 | 5.2 | .78 | 3.0 | 285 | 2.2 | 41 | 2.0 | 8.7 | 1.7 | 1.1 |
| 11 | 7.1 | 18 | 4.5 | .78 | 2.5 | 60 | 2.1 | .45 | 2.6 | 14 | 1.2 | 2.3 |
| 12 | 9.9 | 15 | 4.0 | .76 | 2.0 | 25 | 1.9 | .67 | 1.8 | 10 | .77 | 2.4 |
| 13 | 8.5 | 18 | 3.6 | .76 | 1.6 | 55 | 1.8 | .50 | 1.2 | 7.8 | .60 | 1.6 |
| 14 | 5.7 | 20 | 3.2 | .74 | 1.4 | 31 | 2.3 | .50 | 2.1 | 6.0 | .91 | 1.0 |
| 15 | 4.3 | 15 | 2.9 | .74 | 1.2 | 17 | 3.1 | .71 | 8.6 | 6.4 | 1.3 | .71 |
| 16 | 3.1 | 39 | 2.7 | .72 | 1.1 | 16 | 3.6 | 1.2 | 5.8 | 16 | .94 | .55 |
| 17 | 2.4 | 22 | 2.5 | 1.6 | 1.0 | 16 | 3.2 | 8.7 | 3.6 | 8.3 | .69 | .46 |
| 18 | 2.9 | 77 | 2.3 | 12 | .96 | 25 | 2.8 | 22 | 2.8 | 6.1 | .44 | .41 |
| 19 | 14 | 66 | 2.1 | 13 | 2.0 | 26 | 2.7 | 10 | 2.3 | 4.7 | .37 | .41 |
| 20 | 9.0 | 37 | 1.9 | 11 | 5.4 | 13 | 2.5 | 6.4 | 1.7 | 3.7 | .32 | .41 |
| 21 | 7.2 | 16 | 1.8 | 9.0 | 4.3 | 8.4 | 2.3 | 4.7 | 1.2 | 2.7 | .28 | .98 |
| 22 | 5.8 | 12 | 1.7 | 11 | 3.5 | 7.4 | 1.8 | 3.7 | 1.5 | 2.3 | .24 | 2.5 |
| 23 | 8.1 | 10 | 1.6 | 8.0 | 2.9 | 7.2 | 1.6 | 3.0 | 1.2 | 1.7 | .21 | 9.7 |
| 24 | 50 | 8.5 | 1.5 | 5.6 | 2.5 | 6.4 | 1.5 | 2.4 | .68 | 1.4 | .18 | 7.0 |
| 25 | 16 | 7.6 | 1.4 | 4.1 | 2.2 | 6.4 | 1.5 | 2.0 | .54 | 2.4 | .17 | 92 |
| 26 | 11 | 8.0 | 1.3 | 2.9 | 2.7 | 11 | 1.4 | 1.7 | .48 | 2.1 | .61 | 87 |
| 27 | 7.7 | 7.3 | 1.2 | 2.3 | 2.3 | 8.7 | 1.1 | 3.4 | 120 | 1.5 | 1.2 | 51 |
| 28 | 6.1 | 6.9 | 1.2 | 1.9 | 2.0 | 7.3 | 1.0 | 3.3 | 54 | 1.6 | .91 | 25 |
| 29 | 5.4 | 6.2 | 1.1 | 1.7 | --- | 6.5 | .79 | 2.7 | 20 | 1.1 | .57 | 66 |
| 30 | 4.7 | 5.8 | 1.1 | 1.5 | --- | 5.6 | 2.2 | 2.2 | 13 | .72 | .39 | 57 |
| 31 | 4.8 | --- | 1.0 | 1.3 | --- | 4.8 | --- | 1.6 | --- | .66 | .34 | --- |
| TOTAL | 217.53 | 723.5 | 259.9 | 100.00 | 137.26 | 688.8 | 76.19 | 88.89 | 265.09 | 192.68 | 29.98 | 411.31 |
| MEAN | 7.02 | 24.1 | 8.38 | 3.23 | 4.90 | 22.2 | 2.54 | 2.87 | 8.84 | 6.22 | .97 | 13.7 |
| MAX | 50 | 93 | 82 | 13 | 30 | 285 | 4.5 | 22 | 120 | 18 | 5.1 | 92 |
| MIN | .15 | 5.8 | 1.0 | .72 | .96 | 1.6 | .79 | .41 | .48 | .66 | .17 | .14 |
| CFSM | .78 | 2.69 | .94 | .36 | .55 | 2.48 | .28 | .32 | .99 | .69 | .11 | 1.53 |
| IN. | .90 | 3.00 | 1.08 | .42 | .57 | 2.86 | .32 | .37 | 1.10 | .80 | .12 | 1.71 |

CAL YR 1985 TOTAL 2186.48 MEAN 5.99 MAX 93 MIN .10 CFSM .67 IN 9.08
WTR YR 1986 TOTAL 3191.13 MEAN 8.74 MAX 285 MIN .14 CFSM .98 IN 13.25

## 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI

**LOCATION.**--Lat 42°39'03", long 88°33'03", in NW 1/4 NE 1/4 sec.12, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 200 ft downstream of State Highway 15, 1.1 mi upstream from Delavan Lake inlet at Mounds Road, and 1.5 mi south of Elkhorn.

**DRAINAGE AREA.**--4.34 $mi^2$.

### WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1983 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 930 ft, from topographic map.

**REMARKS.**--Estimated daily discharges: None except for ice period listed in rating tables below. Records good except for ice-affected period, which is fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 162 $ft^3/s$ Sept. 26, 1986, gage height, 9.55 ft; minimum daily, 0.25 $ft^3/s$, July 10, 27, 1985.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 162 $ft^3/s$ Sept. 26, gage height, 9.55 ft; minimum daily, 0.43 $ft^3/s$, Oct. 2.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13 to Jan. 17.)

Oct. 1 to Dec. 1

| | | | |
|---|---|---|---|
| 5.2 | .34 | 5.8 | 7.4 |
| 5.3 | .62 | 6.0 | 12 |
| 5.4 | 1.0 | 6.5 | 23 |
| 5.5 | 1.7 | 7.0 | 37 |
| 5.6 | 3.0 | 8.0 | 72 |

Dec. 1 (1045) to Sept. 30

| | | | |
|---|---|---|---|
| 5.1 | .33 | 5.8 | 8.2 |
| 5.2 | .50 | 6.0 | 12 |
| 5.3 | .85 | 6.5 | 25 |
| 5.4 | 1.8 | 7.0 | 41 |
| 5.5 | 3.2 | 8.0 | 84 |
| 5.6 | 4.8 | 9.0 | 140 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .47 | 69 | 62 | .66 | 2.8 | 1.9 | 3.4 | 1.6 | .79 | 3.1 | .78 | .66 |
| 2 | .43 | 46 | 16 | .64 | 1.6 | 2.5 | 2.4 | 1.2 | .71 | 2.7 | .75 | .78 |
| 3 | .61 | 13 | 6.0 | .64 | 1.3 | 2.2 | 4.0 | 1.1 | .75 | 2.2 | .67 | .68 |
| 4 | 10 | 9.2 | 5.0 | .64 | 36 | 3.6 | 3.2 | 1.1 | .85 | 2.0 | .67 | .64 |
| 5 | 4.2 | 7.6 | 4.7 | .62 | 17 | 4.5 | 3.3 | 1.7 | 12 | 1.8 | .70 | .67 |
| 6 | 1.1 | 8.5 | 4.6 | .62 | 7.4 | 3.8 | 2.5 | 1.2 | 2.8 | 26 | 8.8 | .54 |
| 7 | .85 | 9.1 | 4.5 | .62 | 5.1 | 2.6 | 2.4 | .92 | 1.9 | 25 | 2.2 | .50 |
| 8 | 2.2 | 6.2 | 4.7 | .60 | 4.0 | 1.9 | 1.9 | .83 | 1.4 | 9.7 | 1.4 | .64 |
| 9 | 35 | 20 | 4.5 | .60 | 2.8 | 15 | 1.7 | .83 | 1.0 | 10 | .94 | 7.1 |
| 10 | 24 | 21 | 4.7 | .58 | 2.4 | 110 | 1.5 | .85 | 5.4 | 8.6 | 1.7 | 13 |
| 11 | 8.7 | 10 | 4.9 | .58 | 2.3 | 18 | 1.5 | .87 | 2.6 | 9.9 | 1.0 | 6.7 |
| 12 | 16 | 12 | 3.5 | .58 | 1.9 | 10 | 1.4 | 1.4 | 1.5 | 5.9 | .82 | 3.0 |
| 13 | 9.3 | 13 | 3.0 | .56 | 1.5 | 24 | 1.3 | .90 | 1.1 | 4.2 | .69 | 1.5 |
| 14 | 4.5 | 11 | 2.6 | .56 | 1.5 | 14 | 3.4 | .90 | 8.3 | 3.3 | 3.9 | 1.2 |
| 15 | 3.0 | 8.2 | 2.2 | .56 | 1.3 | 9.3 | 3.1 | 3.3 | 6.3 | 9.9 | 1.0 | .98 |
| 16 | 1.9 | 23 | 2.0 | .70 | 1.3 | 9.2 | 2.8 | 1.5 | 3.2 | 8.2 | .74 | .81 |
| 17 | 1.8 | 9.7 | 1.6 | 1.7 | 1.4 | 9.1 | 2.0 | 18 | 1.9 | 4.3 | .66 | .93 |
| 18 | 5.4 | 40 | 1.3 | 8.3 | 1.6 | 19 | 1.7 | 10 | 1.6 | 3.2 | .71 | 1.4 |
| 19 | 18 | 19 | 1.1 | 6.0 | 4.0 | 14 | 1.5 | 3.9 | 1.4 | 2.7 | .67 | 1.1 |
| 20 | 8.1 | 10 | 1.0 | 3.2 | 4.5 | 6.2 | 1.4 | 2.6 | 1.1 | 2.2 | .57 | .89 |
| 21 | 5.3 | 4.7 | .90 | 4.2 | 3.6 | 4.6 | 1.5 | 2.1 | 1.0 | 1.9 | .55 | 5.7 |
| 22 | 3.3 | 4.3 | .86 | 5.5 | 2.5 | 4.2 | 1.3 | 1.6 | 2.9 | 1.8 | .63 | 8.4 |
| 23 | 12 | 3.5 | .84 | 3.1 | 2.3 | 4.2 | 1.2 | 1.4 | 1.0 | 1.3 | .54 | 12 |
| 24 | 28 | 2.6 | .82 | 2.2 | 2.5 | 3.9 | 1.2 | 1.2 | .87 | 1.1 | .47 | 12 |
| 25 | 6.0 | 2.7 | .80 | 1.9 | 2.4 | 4.2 | 1.2 | 1.0 | .72 | 4.6 | .60 | 52 |
| 26 | 3.4 | 4.7 | .78 | 1.4 | 2.4 | 11 | 1.2 | 1.1 | .66 | 1.2 | 14 | 59 |
| 27 | 2.2 | 3.2 | .76 | 1.3 | 2.0 | 5.6 | .96 | 4.6 | 48 | .97 | 2.5 | 13 |
| 28 | 1.8 | 2.7 | .74 | 1.2 | 1.7 | 4.6 | 1.2 | 1.7 | 7.8 | 3.3 | .99 | 28 |
| 29 | 1.5 | 2.2 | .72 | .94 | --- | 3.9 | .95 | 1.2 | 4.5 | 1.3 | .90 | 69 |
| 30 | 1.4 | 2.1 | .72 | .75 | --- | 3.3 | 5.8 | 1.1 | 4.2 | .85 | .74 | 21 |
| 31 | 3.8 | --- | .70 | .73 | --- | 2.7 | --- | .93 | --- | .79 | .68 | --- |
| TOTAL | 224.26 | 398.2 | 148.54 | 52.18 | 121.1 | 333.0 | 62.91 | 72.63 | 128.25 | 164.01 | 51.97 | 323.82 |
| MEAN | 7.23 | 13.3 | 4.79 | 1.68 | 4.33 | 10.7 | 2.10 | 2.34 | 4.28 | 5.29 | 1.68 | 10.8 |
| MAX | 35 | 69 | 62 | 8.3 | 36 | 110 | 5.8 | 18 | 48 | 26 | 14 | 69 |
| MIN | .43 | 2.1 | .70 | .56 | 1.3 | 1.9 | .95 | .83 | .66 | .79 | .47 | .50 |
| CFSM | 1.67 | 3.07 | 1.10 | .39 | 1.00 | 2.47 | .48 | .54 | .99 | 1.22 | .39 | 2.49 |
| IN. | 1.92 | 3.41 | 1.27 | .45 | 1.04 | 2.85 | .54 | .62 | 1.10 | 1.41 | .45 | 2.77 |

CAL YR 1985 TOTAL 1709.64 MEAN 4.68 MAX 69 MIN .25 CFSM 1.08 IN 14.65
WTR YR 1986 TOTAL 2080.87 MEAN 5.70 MAX 110 MIN .43 CFSM 1.31 IN 17.83

## 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.
TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5,520 mg/L Aug. 7, 1984; minimum observed, 1 mg/L on several days during 1984.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 58 tons Nov. 1, 1984; minimum daily, 0.01 ton on many days from 1984 to 1986.
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 8.20 mg/L Aug. 7, 1984; minimum observed, 0.04 mg/L Oct. 12, 1984.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 216 lb May 25, 1984; minimum daily, 0.18 lb Oct. 11, 1984.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,760 mg/L July 6; minimum observed, 4 mg/L Nov. 4 and Feb. 6.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 82 tons Mar. 10; minimum daily, 0.01 ton Oct. 1-2, Sept. 6-7.
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.30 mg/L June 5; minimum observed, 0.09 mg/L Feb. 12.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 391 lb Mar. 10; minimum daily, 0.40 lb on several days.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 04... | 0915 | 19 | .710 | 848 |
| 04... | 0930 | 20 | -- | 125 |
| 04... | 1000 | 23 | -- | 81 |
| 04... | 1030 | 26 | 1.20 | -- |
| 04... | 1045 | 27 | -- | 95 |
| 04... | 1115 | 28 | -- | 71 |
| 04... | 1130 | 28 | 1.60 | -- |
| 04... | 1215 | 28 | -- | 57 |
| 04... | 1245 | 25 | -- | 56 |
| 04... | 1330 | 21 | 1.20 | -- |
| 04... | 1400 | 19 | -- | 72 |
| 04... | 1430 | 16 | -- | 74 |
| 04... | 1515 | 14 | -- | 27 |
| 04... | 1530 | 13 | .900 | -- |
| 04... | 1800 | 9.8 | -- | 38 |
| 05... | 1100 | 3.4 | -- | 7 |
| 05... | 1108 | 3.4 | .380 | -- |
| 07... | 0925 | .84 | -- | 8 |
| 09... | 1346 | 85 | .830 | 111 |
| 09... | 1400 | 87 | -- | 101 |
| 10... | 1310 | 18 | .400 | 25 |
| 10... | 1530 | 20 | -- | 84 |
| 10... | 1630 | 20 | -- | 53 |
| 10... | 1800 | 18 | -- | 49 |
| 10... | 1830 | 18 | .460 | -- |
| 10... | 1930 | 18 | -- | 35 |
| 10... | 2130 | 16 | -- | 33 |
| 10... | 2300 | 13 | -- | 26 |
| 10... | 2330 | 13 | .380 | -- |
| 11... | 0801 | 10 | .230 | 153 |
| 11... | 1345 | 7.6 | .210 | 46 |
| 12... | 1115 | 21 | .640 | -- |
| 12... | 1130 | 21 | -- | 66 |
| 12... | 1200 | 19 | -- | 78 |
| 12... | 1245 | 18 | -- | 64 |
| 12... | 1300 | 18 | .490 | -- |
| 12... | 1330 | 17 | -- | 67 |
| 12... | 1415 | 17 | -- | 82 |
| 12... | 1500 | 17 | -- | 76 |
| 12... | 1515 | 16 | .440 | -- |
| 12... | 1545 | 16 | -- | 74 |
| 12... | 1615 | 14 | -- | 76 |
| 12... | 1645 | 14 | -- | 87 |
| 14... | 0920 | 4.9 | -- | 73 |
| 14... | 2400 | 3.6 | .710 | -- |
| 18... | 2100 | 14 | -- | 193 |
| OCT , 1985 | | | | |
| 18... | 2115 | 14 | -- | 116 |
| 18... | 2145 | 14 | .600 | -- |
| 18... | 2200 | 14 | -- | 84 |
| 18... | 2315 | 14 | -- | 68 |
| 18... | 2345 | 15 | -- | 85 |
| 19... | 0015 | 22 | -- | 216 |
| 19... | 0100 | 28 | -- | 443 |
| 19... | 0130 | 34 | -- | 110 |
| 19... | 0145 | 34 | .670 | -- |
| 19... | 0200 | 35 | -- | 118 |
| 19... | 0230 | 36 | -- | 89 |
| 19... | 0300 | 36 | -- | 125 |
| 19... | 0315 | 36 | .710 | -- |
| 21... | 0905 | 5.5 | -- | 182 |
| 23... | 0730 | 2.7 | .240 | 112 |
| 24... | 1140 | 16 | .270 | 110 |
| 24... | 1141 | 16 | .280 | 103 |
| 24... | 1215 | 15 | -- | 184 |
| 24... | 1500 | 13 | -- | 57 |
| 24... | 1700 | 11 | -- | 36 |
| 24... | 1830 | 10 | -- | 58 |
| 31... | 2015 | 11 | -- | 173 |
| 31... | 2020 | 12 | .630 | -- |
| 31... | 2045 | 12 | -- | 106 |
| 31... | 2130 | 13 | -- | 78 |
| 31... | 2215 | 14 | -- | 66 |
| 31... | 2300 | 16 | -- | 63 |
| 31... | 2400 | 17 | -- | 54 |
| NOV | | | | |
| 01... | 0100 | 18 | -- | 60 |
| 01... | 0115 | 19 | .650 | -- |
| 01... | 0130 | 20 | -- | 57 |
| 01... | 0200 | 20 | -- | 59 |
| 01... | 0245 | 22 | -- | 64 |
| 01... | 0905 | 56 | .650 | 58 |
| 01... | 0930 | 56 | -- | 61 |
| 01... | 0945 | 56 | -- | 67 |
| 01... | 1015 | 56 | -- | 68 |
| 01... | 1045 | 57 | -- | 65 |
| 01... | 1100 | 58 | .640 | -- |
| 01... | 1115 | 58 | -- | 66 |
| 01... | 1415 | 76 | -- | 117 |
| 01... | 1715 | 106 | -- | 215 |
| 01... | 1915 | 111 | -- | 166 |
| 01... | 2015 | 112 | .590 | -- |
| 01... | 2115 | 108 | -- | 78 |

## 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| NOV , 1985 | | | | |
| 01... | 2215 | 104 | .540 | -- |
| 01... | 2315 | 100 | -- | 55 |
| 02... | 0315 | 93 | -- | 54 |
| 02... | 1100 | 36 | .400 | 39 |
| 02... | 1115 | 35 | -- | 43 |
| 02... | 1315 | 28 | -- | 40 |
| 02... | 1615 | 22 | -- | 35 |
| 02... | 1815 | 20 | -- | 55 |
| 02... | 2015 | 19 | -- | 28 |
| 02... | 2111 | 18 | .270 | -- |
| 02... | 2315 | 17 | -- | 35 |
| 03... | 0315 | 15 | -- | 30 |
| 03... | 0815 | 14 | -- | 9 |
| 03... | 0915 | 14 | -- | 13 |
| 03... | 1015 | 13 | .210 | 14 |
| 03... | 1016 | 13 | .200 | 9 |
| 03... | 1315 | 13 | -- | 18 |
| 04... | 0930 | 9.3 | .220 | 4 |
| 12... | 1615 | 17 | .400 | -- |
| 12... | 1630 | 18 | -- | 140 |
| 12... | 1700 | 18 | -- | 154 |
| 12... | 1745 | 18 | -- | 46 |
| 12... | 1830 | 18 | -- | 64 |
| 12... | 1845 | 18 | -- | 66 |
| 12... | 1900 | 18 | .470 | -- |
| 12... | 1930 | 18 | -- | 73 |
| 12... | 2015 | 17 | -- | 115 |
| 12... | 2115 | 17 | -- | 87 |
| 12... | 2130 | 17 | 1.00 | -- |
| 12... | 2145 | 17 | -- | 131 |
| 12... | 2245 | 16 | -- | 130 |
| 16... | 0215 | 22 | .900 | -- |
| 16... | 0230 | 23 | -- | 268 |
| 16... | 0300 | 27 | -- | 189 |
| 16... | 0330 | 30 | -- | 185 |
| 16.. | 0345 | 31 | .580 | -- |
| 16... | 0400 | 33 | -- | 175 |
| 16... | 0430 | 36 | -- | 165 |
| 16... | 0545 | 39 | -- | 132 |
| 16... | 0615 | 40 | -- | 132 |
| 16... | 0630 | 40 | .590 | -- |
| 16... | 0645 | 40 | -- | 127 |
| 16... | 0715 | 40 | -- | 106 |
| 16... | 0745 | 38 | -- | 109 |
| 16... | 0830 | 36 | -- | 94 |
| 16... | 0845 | 35 | .490 | -- |
| 18... | 0815 | 70 | .490 | -- |
| 18... | 0816 | 70 | .600 | 270 |
| 18... | 0845 | 81 | -- | 232 |
| 18... | 0900 | 84 | .560 | -- |
| 18... | 0915 | 86 | -- | 205 |
| 18... | 0916 | 86 | -- | 196 |
| 18... | 0945 | 88 | .500 | -- |
| 18... | 1000 | 88 | -- | 148 |
| 18... | 1030 | 88 | -- | 139 |
| 18... | 1100 | 84 | -- | 136 |
| 18... | 1300 | 69 | .460 | -- |
| 18... | 1400 | 59 | -- | 100 |
| 18... | 1600 | 43 | -- | 88 |
| 18... | 1800 | 36 | -- | 101 |
| 18... | 2000 | 34 | -- | 51 |
| 18... | 2200 | 30 | -- | 45 |
| 18... | 2400 | 27 | -- | 88 |
| 19... | 0100 | 24 | .360 | -- |
| 19... | 0200 | 23 | -- | 43 |
| 19... | 1600 | 20 | -- | 167 |
| 19... | 1645 | 19 | .450 | -- |
| 19... | 1800 | 23 | -- | 51 |
| 19... | 1845 | 24 | -- | 80 |
| 19... | 1900 | 24 | .400 | -- |
| 19... | 1915 | 24 | -- | 77 |
| 19... | 1945 | 24 | -- | 44 |
| 19... | 2015 | 24 | -- | 38 |
| 19... | 2030 | 23 | .510 | -- |
| 19... | 2045 | 23 | -- | 37 |
| 19... | 2130 | 22 | -- | 102 |
| 19... | 2230 | 21 | -- | 31 |
| 21... | 1240 | 4.4 | .150 | 50 |
| 25... | 1030 | 4.6 | -- | 45 |

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| DEC , 1985 | | | | | |
| 01... | 0530 | -- | 19 | -- | 172 |
| 01... | 0600 | -- | 23 | -- | 183 |
| 01... | 0645 | -- | 33 | .530 | 134 |
| 01... | 0730 | -- | 48 | -- | 177 |
| 01... | 0745 | -- | 56 | .290 | -- |
| 01... | 0800 | -- | 64 | -- | 207 |
| 01... | 0900 | -- | 85 | -- | 257 |
| 01... | 0945 | -- | 98 | -- | 181 |
| 01... | 1015 | -- | 102 | -- | 207 |
| 01... | 1030 | -- | 104 | .440 | -- |
| 01... | 1045 | -- | 129 | -- | 209 |
| 01... | 1115 | -- | 128 | -- | 211 |
| 01... | 1130 | -- | 128 | .450 | -- |
| 01... | 1200 | -- | 128 | .560 | 127 |
| 01... | 1201 | -- | 128 | .430 | -- |
| 01... | 1225 | -- | 128 | -- | 105 |
| 01... | 1515 | -- | 118 | .430 | -- |
| 01... | 2315 | -- | 26 | .300 | -- |
| 04... | 0940 | 5.0 | -- | .190 | 163 |
| 09... | 0735 | 4.5 | -- | -- | 206 |
| 16... | 0905 | 2.0 | -- | -- | 235 |
| 23... | 0805 | .84 | -- | -- | 26 |
| 31... | 0930 | .70 | -- | -- | 61 |
| JAN , 1986 | | | | | |
| 06... | 0825 | .62 | -- | -- | 97 |
| 09... | 1445 | .60 | -- | .130 | 26 |
| 13... | 0815 | .56 | -- | -- | 61 |
| 20... | 0820 | -- | 3.3 | -- | 6 |
| 27... | 1245 | -- | 1.3 | -- | 58 |
| FEB | | | | | |
| 01... | 1315 | -- | 5.3 | -- | 106 |
| 01... | 1415 | -- | 6.2 | -- | 89 |
| 01... | 1615 | -- | 5.5 | -- | 49 |
| 01... | 1915 | -- | 3.5 | -- | 30 |
| 01... | 2215 | -- | 2.7 | -- | 29 |
| 02... | 0015 | -- | 2.3 | -- | 36 |
| 02... | 0315 | -- | 1.9 | -- | 74 |
| 03... | 0825 | -- | 1.1 | -- | 91 |
| 04... | 1016 | -- | 21 | .680 | 568 |
| 04... | 1030 | -- | 23 | -- | 605 |
| 04... | 1100 | -- | 29 | -- | 610 |
| 04... | 1200 | -- | 43 | -- | 640 |
| 04... | 1230 | -- | 42 | .470 | -- |
| 04... | 1315 | -- | 48 | -- | 371 |
| 04... | 1330 | -- | 55 | -- | 426 |
| 04... | 1400 | -- | 59 | -- | 284 |
| 04... | 1430 | -- | 64 | .400 | -- |
| 04... | 1445 | -- | 71 | -- | 267 |
| 04... | 1515 | -- | 82 | -- | 257 |
| 04... | 1545 | -- | 86 | -- | 205 |
| 04... | 1615 | -- | 86 | -- | 166 |
| 04... | 1630 | -- | 86 | .490 | -- |
| 04... | 1700 | -- | 85 | -- | 121 |
| 05... | 0800 | -- | 18 | .370 | 37 |
| 05... | 1400 | -- | 13 | .190 | 24 |
| 06... | 0735 | -- | 7.7 | .180 | 4 |
| 10... | 0740 | -- | 2.3 | -- | 26 |
| 12... | 1050 | -- | 1.7 | .090 | 30 |
| 17... | 0845 | -- | 1.2 | -- | 39 |
| 24... | 0730 | -- | 1.9 | -- | 56 |
| MAR | | | | | |
| 03... | 0735 | -- | 2.0 | -- | 62 |
| 09... | 1915 | -- | 22 | .580 | -- |
| 09... | 1930 | -- | 24 | -- | 137 |
| 09... | 2000 | -- | 24 | -- | 131 |
| 09... | 2030 | -- | 26 | -- | 182 |
| 09... | 2100 | -- | 33 | -- | 150 |
| 09... | 2130 | -- | 41 | .550 | -- |
| 09... | 2145 | -- | 46 | -- | 156 |
| 09... | 2215 | -- | 58 | -- | 302 |
| 09... | 2245 | -- | 72 | -- | 323 |
| 09... | 2315 | -- | 93 | -- | 234 |
| 09... | 2330 | -- | 103 | .680 | -- |
| 09... | 2345 | -- | 116 | -- | 286 |
| 10... | 0015 | -- | 131 | -- | 544 |
| 10... | 0100 | -- | 139 | -- | 566 |
| 10... | 0130 | -- | 141 | -- | 697 |
| 10... | 0145 | -- | 142 | .690 | -- |
| 10... | 0800 | -- | 133 | .560 | -- |

## 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| MAR , 1986 | | | | |
| 10... | 0801 | 133 | .490 | 215 |
| 10... | 0915 | 131 | -- | 230 |
| 10... | 1215 | 137 | -- | 287 |
| 10... | 1415 | 142 | -- | 168 |
| 10... | 1515 | 134 | .800 | -- |
| 10... | 1615 | 124 | -- | 90 |
| 10... | 1715 | 103 | -- | 80 |
| 10... | 2015 | 37 | -- | 90 |
| 10... | 2315 | 22 | -- | 57 |
| 11... | 0015 | 20 | .410 | -- |
| 11... | 1525 | 23 | .500 | 57 |
| 13... | 0245 | 27 | -- | 387 |
| 13... | 0345 | 31 | -- | 226 |
| 13... | 0400 | 31 | -- | -- |
| 13... | 0415 | 30 | -- | 207 |
| 13... | 0500 | 28 | -- | 171 |
| 13... | 0600 | 27 | -- | 97 |
| 13... | 0700 | 26 | -- | 81 |
| 13... | 0800 | 24 | -- | 58 |
| 13... | 0845 | 23 | -- | 45 |
| 17... | 0815 | 7.9 | -- | 36 |
| 18... | 1245 | 24 | -- | 61 |
| 18... | 1316 | 24 | -- | 60 |
| 18... | 1330 | 24 | -- | 48 |
| 18... | 1500 | 24 | -- | 34 |
| 18... | 1800 | 23 | -- | 36 |
| 18... | 1900 | 23 | -- | 49 |
| 18... | 2030 | 23 | -- | 28 |
| 18... | 2230 | 22 | -- | 37 |
| 19... | 0030 | 21 | -- | 21 |
| 19... | 0800 | 16 | -- | 33 |
| 20... | 0720 | 6.0 | -- | 28 |
| 26... | 0430 | 20 | -- | 169 |
| 26... | 0530 | 20 | -- | 82 |
| 26... | 1100 | 13 | -- | 22 |
| 31... | 0740 | 2.7 | -- | 33 |
| APR | | | | |
| 07... | 0810 | 2.4 | -- | 105 |
| 14... | 0735 | 1.2 | -- | 140 |
| 21... | 0740 | 1.7 | -- | 46 |
| 28... | 0800 | 1.1 | -- | 90 |
| 29... | 0730 | .93 | .180 | 85 |
| 30... | 0230 | 18 | -- | 672 |
| 30... | 0315 | 8.3 | -- | 213 |
| 30... | 0430 | 3.6 | -- | 149 |
| 30... | 0530 | 14 | -- | 85 |
| 30... | 0600 | 12 | -- | 64 |
| 30... | 0700 | 9.6 | -- | 34 |
| 30... | 0735 | 8.3 | 1.20 | 28 |
| MAY | | | | |
| 06... | 0940 | 1.2 | -- | 52 |
| 12... | 0930 | 1.5 | -- | 26 |
| 15... | 1915 | 12 | -- | 282 |
| 15... | 1930 | 11 | 1.20 | -- |
| 16... | 0725 | 1.4 | .760 | 29 |
| 17... | 0400 | 11 | -- | 542 |
| 17... | 0430 | 9.8 | .860 | -- |
| 17... | 0840 | 3.5 | 1.30 | 26 |
| 17... | 1445 | 10 | -- | 255 |
| 17... | 1630 | 19 | -- | 393 |
| 17... | 1700 | 27 | -- | 300 |
| 17... | 1730 | 46 | .900 | -- |
| 17... | 1745 | 50 | -- | 581 |
| 17... | 1815 | 59 | -- | 433 |
| 17... | 1915 | 71 | -- | 338 |
| 17... | 1930 | 71 | 1.30 | -- |
| 17... | 1945 | 70 | -- | 267 |
| 17... | 2000 | 67 | .840 | 239 |
| 17... | 2001 | 67 | .980 | -- |
| 19... | 1410 | 3.6 | .400 | 112 |
| 27... | 0816 | 14 | -- | 629 |
| 27... | 0820 | 15 | 1.10 | 319 |
| 27... | 0845 | 16 | -- | 233 |
| 27... | 0846 | 16 | 1.60 | -- |
| 27... | 0915 | 14 | -- | 92 |
| 27... | 0945 | 12 | -- | 66 |
| 27... | 1015 | 11 | -- | 61 |
| 27... | 1100 | 9.6 | -- | 43 |
| JUN , 1986 | | | | |
| 04... | 1350 | .67 | .320 | 25 |
| 05... | 0715 | 23 | -- | 949 |
| 05... | 0730 | 35 | 2.30 | -- |
| 05... | 0745 | 41 | -- | 710 |
| 05... | 0800 | 42 | -- | 271 |
| 05... | 0815 | 41 | -- | 247 |
| 05... | 0830 | 41 | .800 | -- |
| 05... | 0900 | 46 | .810 | -- |
| 05... | 0930 | 42 | -- | 172 |
| 05... | 0945 | 41 | 1.40 | -- |
| 05... | 1000 | 39 | -- | 139 |
| 05... | 1100 | 28 | -- | 58 |
| 05... | 1115 | 26 | 1.10 | -- |
| 05... | 1215 | 18 | -- | 52 |
| 05... | 1330 | 13 | -- | 53 |
| 05... | 1345 | 13 | .800 | -- |
| 06... | 0930 | 2.7 | -- | 63 |
| 08... | 0845 | 45 | -- | 258 |
| 08... | 0915 | 45 | -- | 203 |
| 14... | 1800 | 12 | -- | 76 |
| 14... | 1815 | 18 | 1.10 | -- |
| 14... | 1830 | 23 | -- | 186 |
| 14... | 1900 | 25 | -- | 366 |
| 14... | 1915 | 28 | -- | 265 |
| 14... | 1930 | 28 | 1.00 | -- |
| 14... | 1931 | 28 | 1.10 | -- |
| 14... | 1945 | 29 | -- | 208 |
| 14... | 2000 | 29 | 1.10 | -- |
| 14... | 2015 | 29 | -- | 156 |
| 14... | 2030 | 28 | 1.30 | -- |
| 14... | 2045 | 28 | -- | 120 |
| 14... | 2115 | 26 | -- | 100 |
| 14... | 2200 | 22 | -- | 75 |
| 14... | 2230 | 20 | 1.10 | -- |
| 14... | 2300 | 18 | -- | 73 |
| 15... | 1030 | 5.7 | .300 | 8 |
| 18... | 1335 | 1.7 | .270 | 37 |
| 22... | 0915 | 13 | -- | 168 |
| 22... | 0930 | 13 | .670 | -- |
| 22... | 0945 | 12 | -- | 66 |
| 22... | 1015 | 10 | -- | 36 |
| 27... | 0500 | 52 | 1.90 | -- |
| 27... | 0515 | 59 | -- | 644 |
| 27... | 0545 | 109 | -- | 1540 |
| 27... | 0615 | 125 | .610 | -- |
| 27... | 0630 | 133 | -- | 1030 |
| 27... | 0700 | 143 | -- | 666 |
| 27... | 0730 | 149 | -- | 542 |
| 27... | 0745 | 149 | .700 | -- |
| 27... | 1350 | 45 | .540 | -- |
| 27... | 1355 | 44 | -- | 81 |
| 27... | 1430 | 36 | -- | 140 |
| 27... | 1500 | 31 | -- | 108 |
| 27... | 1545 | 25 | .540 | -- |
| 27... | 1630 | 22 | -- | 105 |
| 27... | 1715 | 20 | -- | 139 |
| 27... | 1730 | 19 | .500 | -- |
| 30... | 0900 | 6.4 | .880 | 184 |
| JUL | | | | |
| 06... | 2000 | 110 | .610 | 1760 |
| 06... | 2030 | 129 | -- | 1200 |
| 06... | 2045 | 138 | .740 | -- |
| 06... | 2100 | 145 | -- | 711 |
| 06... | 2130 | 153 | -- | 659 |
| 06... | 2145 | 154 | 1.50 | -- |
| 06... | 2200 | 154 | -- | 496 |
| 06... | 2230 | 147 | -- | 408 |
| 06... | 2315 | 132 | -- | 337 |
| 06... | 2345 | 121 | .740 | -- |
| 06... | 2400 | 115 | -- | 260 |
| 07... | 0030 | 105 | .630 | 211 |
| 07... | 0115 | 90 | -- | 165 |
| 07... | 0200 | 73 | -- | 121 |
| 07... | 0230 | 63 | -- | 101 |
| 07... | 1010 | 15 | .590 | 376 |
| 09... | 1120 | 10 | .570 | 127 |
| 10... | 2030 | 26 | .770 | -- |
| 10... | 2045 | 25 | -- | 451 |

## 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| JUL , 1986 | | | | |
| 10... | 2130 | 22 | -- | 291 |
| 10... | 2145 | 22 | 1.70 | -- |
| 10... | 2200 | 21 | -- | 194 |
| 10... | 2245 | 21 | -- | 146 |
| 10... | 2310 | 21 | 1.10 | -- |
| 10... | 2315 | 21 | -- | 150 |
| 11... | 0015 | 19 | -- | 129 |
| 11... | 0030 | 18 | .670 | -- |
| 11... | 0045 | 18 | -- | 123 |
| 11... | 1025 | 9.5 | .560 | -- |
| 11... | 1035 | 9.5 | -- | 248 |
| 15... | 1945 | 52 | -- | 486 |
| 15... | 2100 | 43 | -- | 152 |
| 15... | 2130 | 42 | -- | 124 |
| 15... | 2230 | 34 | -- | 186 |
| 15... | 2300 | 28 | -- | 189 |
| 15... | 2400 | 21 | -- | 145 |
| 16... | 1305 | 6.9 | .600 | -- |
| 17... | 2000 | 4.0 | .620 | -- |
| 17... | 2115 | 3.6 | 1.00 | -- |
| 17... | 2245 | 3.6 | .880 | -- |
| 17... | 2345 | 3.5 | .820 | -- |
| 22... | 0940 | 1.8 | .140 | 90 |
| AUG | | | | |
| 05... | 0730 | .70 | -- | 46 |
| 06... | 1015 | 17 | -- | 576 |
| 06... | 1030 | 20 | .720 | -- |
| 06... | 1145 | 31 | -- | 397 |
| 06... | 1200 | 34 | .670 | -- |
| 06... | 1215 | 33 | -- | 161 |
| 06... | 1245 | 30 | .670 | 78 |
| 06... | 1246 | 30 | .860 | 171 |
| 06... | 1315 | 24 | -- | 53 |
| 06... | 1515 | 15 | -- | 45 |
| 06... | 1545 | 14 | .560 | -- |
| 06... | 1615 | 12 | -- | 45 |
| 07... | 0820 | 2.4 | .220 | 8 |
| 14... | 0830 | 11 | -- | 89 |
| 14... | 0900 | 11 | -- | 68 |
| 14... | 0930 | 12 | -- | 131 |
| 14... | 1000 | 14 | -- | 164 |
| 14... | 1030 | 13 | -- | 131 |
| 14... | 1100 | 11 | -- | 129 |
| 19... | 0950 | .57 | -- | 209 |
| 26... | 0845 | 35 | .730 | -- |
| 26... | 0900 | 37 | -- | 225 |
| 26... | 0930 | 30 | -- | 497 |
| 26... | 1000 | 36 | .630 | -- |
| 26... | 1030 | 34 | -- | 198 |
| 26... | 1100 | 28 | -- | 237 |
| 26... | 1115 | 25 | -- | 259 |
| 26... | 1130 | 22 | 1.10 | -- |
| 26... | 1145 | 20 | -- | 223 |
| 26... | 1215 | 17 | -- | 157 |
| 26... | 1300 | 34 | -- | 365 |
| 26... | 1315 | 35 | .710 | -- |
| 26... | 1330 | 33 | -- | 145 |
| 26... | 1400 | 27 | -- | 387 |
| 26... | 1430 | 22 | -- | 288 |
| 26... | 1500 | 37 | -- | 330 |
| 26... | 1515 | 38 | .790 | -- |
| 27... | 0745 | 2.7 | .250 | 13 |
| SEP | | | | |
| 09... | 1845 | 27 | -- | 646 |
| 09... | 1900 | 34 | .610 | -- |
| 09... | 1930 | 43 | -- | 424 |
| 09... | 1945 | 46 | .640 | -- |
| 09... | 2000 | 45 | -- | 550 |
| 09... | 2015 | 42 | -- | 420 |
| 09... | 2030 | 39 | .330 | -- |
| 09... | 2045 | 36 | -- | 329 |
| 09... | 2115 | 30 | -- | 228 |
| 09... | 2145 | 24 | -- | 145 |
| 09... | 2215 | 20 | -- | 104 |
| 09... | 2245 | 17 | -- | 78 |
| 09... | 2315 | 15 | .590 | -- |
| 09... | 2330 | 14 | -- | 62 |
| 09... | 2400 | 12 | -- | 46 |
| SEP , 1986 | | | | |
| 10... | 0030 | 10 | -- | 45 |
| 10... | 0115 | 8.4 | -- | 45 |
| 10... | 0800 | 2.9 | .230 | 15 |
| 10... | 1130 | 28 | .380 | -- |
| 10... | 1145 | 49 | -- | 431 |
| 10... | 1200 | 59 | -- | 319 |
| 10... | 1215 | 61 | .360 | -- |
| 10... | 1230 | 59 | -- | 798 |
| 10... | 1300 | 48 | .490 | -- |
| 10... | 1315 | 43 | -- | 433 |
| 10... | 1345 | 37 | -- | 229 |
| 10... | 1400 | 35 | .940 | 166 |
| 10... | 1401 | 35 | .870 | 162 |
| 10... | 1445 | 29 | -- | 115 |
| 10... | 1545 | 21 | -- | 141 |
| 10... | 1615 | 19 | .540 | -- |
| 10... | 1645 | 16 | -- | 187 |
| 10... | 1745 | 13 | -- | 201 |
| 10... | 1945 | 9.0 | .620 | 241 |
| 11... | 0545 | 8.1 | -- | 164 |
| 11... | 0825 | 6.4 | .310 | -- |
| 11... | 1715 | 7.7 | -- | 47 |
| 21... | 0715 | 8.6 | .660 | -- |
| 21... | 0730 | 9.0 | -- | 100 |
| 21... | 0800 | 13 | -- | 321 |
| 21... | 0815 | 17 | .840 | -- |
| 21... | 0845 | 20 | -- | 233 |
| 21... | 0900 | 20 | .500 | -- |
| 21... | 0915 | 19 | -- | 275 |
| 21... | 0930 | 17 | -- | 333 |
| 21... | 1000 | 14 | -- | 247 |
| 21... | 1015 | 13 | .480 | -- |
| 21... | 1030 | 12 | -- | 142 |
| 21... | 1115 | 11 | .310 | -- |
| 21... | 1130 | 11 | -- | 61 |
| 21... | 1200 | 10 | -- | 75 |
| 21... | 1230 | 9.2 | -- | 72 |
| 21... | 1300 | 8.2 | -- | 67 |
| 21... | 1315 | 6.7 | -- | 72 |
| 22... | 0745 | 2.4 | .200 | -- |
| 22... | 1700 | 14 | 1.60 | -- |
| 22... | 1730 | 17 | -- | 461 |
| 22... | 1830 | 16 | -- | 433 |
| 22... | 1930 | 17 | -- | 281 |
| 22... | 2030 | 17 | -- | 223 |
| 22... | 2130 | 19 | .800 | -- |
| 22... | 2200 | 22 | -- | 195 |
| 22... | 2300 | 37 | -- | 295 |
| 22... | 2330 | 40 | .740 | -- |
| 22... | 2400 | 39 | -- | 244 |
| 23... | 0100 | 33 | -- | 143 |
| 23... | 0200 | 28 | -- | 129 |
| 23... | 0300 | 22 | -- | 137 |
| 23... | 0330 | 20 | .600 | -- |
| 23... | 0400 | 18 | -- | 142 |
| 23... | 0500 | 15 | -- | 156 |
| 23... | 0600 | 14 | -- | 166 |
| 23... | 0800 | 11 | .540 | -- |
| 24... | 0100 | 5.0 | .780 | -- |
| 24... | 0430 | 4.5 | .560 | -- |
| 24... | 0745 | 4.3 | .180 | -- |
| 24... | 0800 | 4.3 | .330 | -- |
| 24... | 2030 | 9.0 | -- | 91 |
| 24... | 2100 | 10 | .400 | -- |
| 24... | 2200 | 25 | -- | 366 |
| 24... | 2300 | 97 | .780 | -- |
| 24... | 2330 | 120 | -- | 856 |
| 24... | 2400 | 139 | -- | 1180 |
| 25... | 0130 | 161 | -- | 428 |
| 25... | 0200 | 155 | -- | 349 |
| 25... | 0300 | 138 | -- | 230 |
| 25... | 0400 | 118 | -- | 172 |
| 25... | 0500 | 102 | -- | 112 |
| 25... | 0600 | 85 | -- | 94 |
| 25... | 0700 | 69 | -- | 80 |
| 25... | 0800 | 53 | -- | 92 |
| 25... | 0801 | 53 | .370 | -- |
| 25... | 0900 | 40 | -- | 108 |

### 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| SEP , 1986 | | | | |
| 25... | 1000 | 31 | -- | 141 |
| 25... | 1130 | 24 | -- | 258 |
| 25... | 1300 | 20 | -- | 266 |
| 25... | 1430 | 18 | -- | 310 |
| 25... | 1500 | 17 | .500 | -- |
| 25... | 1530 | 17 | -- | 316 |
| 25... | 1630 | 16 | -- | 328 |
| 25... | 1800 | 15 | -- | 353 |
| 25... | 1930 | 14 | -- | 381 |
| 25... | 2100 | 13 | -- | 305 |
| 25... | 2200 | 12 | .670 | -- |
| 26... | 1545 | 109 | .510 | -- |
| 26... | 1630 | 97 | -- | 175 |
| 26... | 1700 | 90 | -- | 127 |
| 26... | 1800 | 75 | -- | 104 |
| 26... | 1830 | 66 | .580 | -- |
| 26... | 1900 | 59 | -- | 114 |
| 26... | 2030 | 39 | -- | 135 |
| 26... | 2200 | 27 | -- | 183 |
| 26... | 2330 | 22 | -- | 158 |
| 27... | 0130 | 19 | -- | 139 |
| 27... | 0300 | 17 | -- | 132 |
| 27... | 0430 | 16 | -- | 136 |
| 27... | 0530 | 15 | -- | 127 |
| 27... | 1130 | 12 | -- | 311 |
| 27... | 1230 | 12 | -- | 198 |
| 27... | 1400 | 11 | -- | 157 |
| 27... | 1530 | 11 | -- | 174 |
| 27... | 1700 | 11 | -- | 151 |
| 27... | 1830 | 10 | -- | 118 |
| 27... | 2000 | 9.6 | -- | 117 |
| 27... | 2130 | 9.2 | -- | 135 |
| 27... | 2230 | 9.0 | -- | 127 |
| 27... | 2330 | 9.0 | -- | 116 |
| 28... | 0030 | 8.8 | -- | 112 |
| 28... | 1000 | 7.5 | .210 | -- |
| 28... | 1830 | 10 | -- | 313 |
| 28... | 1900 | 72 | .470 | -- |
| 28... | 1930 | 99 | -- | 1690 |
| 28... | 2000 | 110 | -- | 943 |
| 28... | 2030 | 114 | 1.30 | -- |
| 28... | 2100 | 114 | -- | 414 |
| 28... | 2130 | 112 | .850 | -- |
| 28... | 2200 | 107 | -- | 253 |

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|
| SEP , 1986 | | | | | |
| 28... | 2300 | -- | 95 | -- | 176 |
| 28... | 2400 | -- | 81 | -- | 138 |
| 29... | 0100 | -- | 64 | -- | 125 |
| 29... | 0130 | -- | 57 | .500 | -- |
| 29... | 0200 | -- | 50 | -- | 135 |
| 29... | 0300 | -- | 38 | -- | 154 |
| 29... | 0400 | -- | 30 | -- | 179 |
| 29... | 0430 | -- | 27 | -- | 216 |
| 29... | 0530 | -- | 50 | -- | 319 |
| 29... | 0600 | -- | 66 | .680 | -- |
| 29... | 0700 | -- | 96 | -- | 353 |
| 29... | 0800 | -- | 105 | -- | 258 |
| 29... | 0900 | -- | 104 | -- | 192 |
| 29... | 0930 | -- | 100 | .610 | 161 |
| 29... | 0931 | -- | 100 | .650 | -- |
| 29... | 1000 | -- | 95 | -- | 144 |
| 29... | 1100 | -- | 83 | -- | 136 |
| 29... | 1200 | -- | 70 | -- | 135 |
| 29... | 1330 | -- | 53 | -- | 154 |
| 29... | 1500 | -- | 86 | -- | 318 |
| 29... | 1600 | -- | 97 | -- | 251 |
| 29... | 1630 | -- | 98 | .770 | -- |
| 29... | 1800 | -- | 91 | -- | 157 |
| 29... | 1900 | -- | 81 | -- | 157 |
| 29... | 1930 | -- | 75 | .460 | -- |
| 29... | 2000 | -- | 69 | -- | 150 |
| 29... | 2030 | -- | 63 | -- | 159 |
| 29... | 2130 | -- | 51 | .460 | -- |
| 29... | 2200 | -- | 46 | -- | 187 |
| 29... | 2330 | -- | 34 | -- | 218 |
| 30... | 0100 | -- | 27 | -- | 186 |
| 30... | 0300 | -- | 22 | -- | 155 |
| 30... | 0530 | -- | 19 | -- | 120 |
| 30... | 1300 | -- | 22 | -- | 127 |
| 30... | 1330 | -- | 24 | -- | 101 |
| 30... | 1400 | -- | 24 | .500 | -- |
| 30... | 1415 | -- | 24 | -- | 94 |
| 30... | 1445 | -- | 24 | -- | 86 |
| 30... | 1515 | -- | 25 | -- | 106 |
| 30... | 1600 | 27 | -- | .660 | -- |
| 30... | 1615 | -- | 27 | -- | 89 |
| 30... | 1700 | -- | 27 | -- | 88 |
| 30... | 1800 | -- | 25 | -- | 85 |
| 30... | 1845 | -- | 24 | -- | 82 |

# 054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

## WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .01 | 19 | 17 | .12 | .36 | .24 | 1.0 | .08 | .06 | 1.0 | .12 | .02 |
| 2 | .01 | 5.7 | 3.4 | .12 | .30 | .38 | .28 | .04 | .05 | 1.3 | .11 | .02 |
| 3 | .03 | .58 | 1.9 | .13 | .29 | .53 | 1.2 | .03 | .05 | 1.4 | .09 | .02 |
| 4 | 2.1 | .13 | 2.2 | .15 | 20 | .70 | .70 | .03 | .07 | 1.8 | .09 | .02 |
| 5 | .17 | .10 | 2.2 | .15 | 1.7 | .57 | .79 | .37 | 5.9 | 2.3 | .09 | .02 |
| 6 | .02 | 1.5 | 2.2 | .15 | .10 | .36 | .65 | .15 | .49 | 44 | 3.6 | .01 |
| 7 | .02 | 1.6 | 2.3 | .10 | .09 | .42 | .69 | .11 | .30 | 16 | .06 | .01 |
| 8 | .11 | .14 | 2.5 | .07 | .12 | .29 | .56 | .09 | .20 | 4.6 | .03 | .02 |
| 9 | 8.2 | 4.2 | 2.5 | .05 | .13 | 7.6 | .52 | .08 | .14 | 4.6 | .02 | 5.5 |
| 10 | 3.4 | 4.5 | 2.7 | .05 | .16 | 82 | .49 | .07 | 1.9 | 4.2 | .37 | 8.7 |
| 11 | 1.5 | 1.6 | 2.8 | .06 | .17 | 2.6 | .49 | .07 | .68 | 4.6 | .18 | 2.6 |
| 12 | 3.3 | 2.0 | 2.1 | .08 | .15 | .91 | .48 | .28 | .19 | 3.2 | .13 | .37 |
| 13 | 2.2 | 3.9 | 1.8 | .09 | .12 | 6.2 | .47 | .06 | .14 | 1.8 | .10 | .18 |
| 14 | .87 | 2.6 | 1.6 | .09 | .13 | 1.7 | 1.0 | .05 | 2.8 | 1.1 | 1.2 | .14 |
| 15 | .52 | 1.4 | 1.4 | .08 | .12 | 1.1 | .87 | .95 | .70 | 5.1 | .16 | .11 |
| 16 | .30 | 7.2 | 1.2 | .09 | .12 | .96 | .75 | .31 | .11 | 1.7 | .17 | .09 |
| 17 | .26 | 1.2 | .72 | .20 | .13 | .91 | .25 | 12 | .11 | .83 | .20 | .15 |
| 18 | .81 | 12 | .42 | .47 | .20 | 2.0 | .22 | 3.1 | .15 | .64 | .30 | .28 |
| 19 | 4.3 | 2.5 | .26 | .18 | .60 | 1.1 | .19 | 1.3 | .13 | .56 | .36 | .20 |
| 20 | .96 | .96 | .17 | .06 | .70 | .46 | .18 | .71 | .10 | .48 | .28 | .09 |
| 21 | 2.2 | .61 | .11 | .21 | .53 | .32 | .18 | .51 | .08 | .45 | .24 | 1.9 |
| 22 | 1.2 | .57 | .08 | .55 | .34 | .27 | .16 | .35 | .45 | .44 | .25 | 5.0 |
| 23 | 14 | .45 | .06 | .48 | .31 | .25 | .14 | .28 | .10 | .31 | .19 | 4.2 |
| 24 | 9.7 | .32 | .07 | .34 | .35 | .22 | .14 | .22 | .08 | .25 | .15 | 16 |
| 25 | .80 | .33 | .07 | .30 | .34 | .22 | .13 | .16 | .06 | 1.5 | .17 | 41 |
| 26 | .39 | .55 | .08 | .22 | .34 | 1.4 | .13 | .15 | .05 | .24 | 8.5 | 57 |
| 27 | .21 | .37 | .08 | .20 | .27 | .36 | .10 | 1.4 | 53 | .19 | .15 | 5.3 |
| 28 | .15 | .30 | .09 | .18 | .22 | .32 | .34 | .19 | 6.4 | .61 | .03 | 32 |
| 29 | .11 | .23 | .10 | .14 | --- | .30 | .22 | .12 | 2.0 | .23 | .03 | 35 |
| 30 | .09 | .25 | .11 | .10 | --- | .27 | 2.0 | .10 | 1.4 | .14 | .02 | 6.0 |
| 31 | .65 | --- | .12 | .10 | --- | .23 | --- | .08 | --- | .12 | .02 | --- |
| TOTAL | 58.59 | 76.79 | 52.34 | 5.31 | 28.39 | 115.19 | 15.32 | 23.44 | 77.89 | 105.69 | 17.41 | 221.95 |

WATER YEAR 1986 TOTAL 798.31

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.92 | 236 | 141 | .50 | 3.60 | 1.18 | 3.87 | 3.31 | 1.59 | 8.34 | .80 | .77 |
| 2 | .95 | 112 | 24.00 | .50 | 1.30 | 1.52 | 2.77 | 1.30 | 1.38 | 6.75 | .68 | .87 |
| 3 | .90 | 16.00 | 7.80 | .50 | 1.06 | 1.30 | 4.53 | 1.16 | 1.41 | 5.02 | .53 | .73 |
| 4 | 56.00 | 11.00 | 5.40 | .50 | 94.00 | 4.90 | 3.62 | 1.18 | 1.65 | 4.22 | .47 | .66 |
| 5 | 12.00 | 7.87 | 4.80 | .50 | 30.00 | 6.60 | 3.74 | 3.20 | 70.00 | 3.48 | .42 | .67 |
| 6 | 1.69 | 9.41 | 4.70 | .50 | 7.43 | 5.30 | 2.82 | 1.21 | 7.82 | 137 | 29.00 | .52 |
| 7 | .90 | 11.00 | 4.40 | .50 | 4.60 | 3.30 | 2.73 | .93 | 4.66 | 84.00 | 3.12 | .46 |
| 8 | 2.59 | 5.96 | 4.30 | .50 | 3.18 | 1.62 | 2.12 | .82 | 2.93 | 25.00 | 1.53 | .57 |
| 9 | 123 | 43.00 | 4.10 | .50 | 2.01 | 45.00 | 1.91 | .80 | 1.93 | 34.00 | .90 | 18.00 |
| 10 | 68.00 | 46.00 | 4.10 | .40 | 1.53 | 391 | 1.70 | .81 | 14.00 | 37.00 | 3.20 | 38.00 |
| 11 | 12.00 | 21.00 | 4.20 | .40 | 1.31 | 46.00 | 1.66 | .81 | 5.60 | 33.00 | 1.10 | 19.00 |
| 12 | 44.00 | 34.00 | 3.00 | .40 | .98 | 21.00 | 1.56 | 2.50 | 3.37 | 15.00 | .81 | 4.61 |
| 13 | 23.00 | 61.00 | 2.60 | .40 | .75 | 71.00 | 1.45 | .79 | 2.35 | 8.24 | .63 | 1.88 |
| 14 | 14.00 | 35.00 | 2.10 | .40 | .72 | 27.00 | 4.60 | .78 | 47.00 | 5.10 | 9.50 | 1.32 |
| 15 | 9.29 | 17.00 | 1.80 | .40 | .63 | 13.00 | 4.10 | 18.00 | 17.00 | 37.00 | 1.40 | 1.04 |
| 16 | 3.34 | 61.00 | 1.60 | .50 | .60 | 9.79 | 3.60 | 6.05 | 5.23 | 31.00 | 1.01 | .82 |
| 17 | 1.73 | 13.00 | 1.30 | 1.20 | .66 | 8.40 | 3.07 | 103 | 3.02 | 12.00 | .88 | .91 |
| 18 | 10.00 | 100.00 | 1.10 | 14.00 | .76 | 39.00 | 2.59 | 43.00 | 2.41 | 6.66 | .94 | 1.30 |
| 19 | 56.00 | 41.00 | .90 | 9.50 | 5.60 | 24.00 | 2.24 | 9.74 | 1.95 | 4.36 | .86 | .99 |
| 20 | 13.00 | 17.00 | .80 | 4.30 | 6.60 | 5.46 | 2.01 | 5.41 | 1.44 | 2.80 | .72 | .78 |
| 21 | 8.14 | 4.36 | .70 | 6.00 | 4.90 | 3.57 | 2.01 | 3.99 | 1.21 | 1.91 | .68 | 13.00 |
| 22 | 4.78 | 3.50 | .70 | 8.50 | 2.05 | 3.07 | 1.69 | 2.83 | 6.50 | 1.47 | .77 | 37.00 |
| 23 | 23.00 | 2.74 | .70 | 4.10 | 1.81 | 2.84 | 1.56 | 2.26 | 2.04 | .92 | .64 | 35.00 |
| 24 | 67.00 | 1.91 | .70 | 1.63 | 1.91 | 2.49 | 1.51 | 1.79 | 1.65 | .69 | .55 | 38.00 |
| 25 | 8.74 | 1.93 | .60 | 1.46 | 1.80 | 2.49 | 1.38 | 1.39 | 1.30 | 12.00 | .69 | 172 |
| 26 | 4.54 | 3.24 | .60 | 1.10 | 1.74 | 20.00 | 1.32 | 1.28 | 1.15 | 2.86 | 56.00 | 226 |
| 27 | 2.64 | 2.11 | .60 | 1.00 | 1.38 | 6.38 | 1.04 | 20.00 | 182 | 1.64 | 4.23 | 42.00 |
| 28 | 1.98 | 1.71 | .60 | .93 | 1.10 | 5.21 | 1.22 | 4.51 | 17.00 | 7.60 | 1.34 | 111 |
| 29 | 1.55 | 1.30 | .50 | .75 | --- | 4.43 | .97 | 2.75 | 6.90 | 2.06 | 1.17 | 218 |
| 30 | 1.31 | 1.24 | .50 | .60 | --- | 3.70 | 36.00 | 2.34 | 15.00 | 1.15 | .93 | 61.00 |
| 31 | 10.00 | --- | .50 | .59 | --- | 3.10 | --- | 1.94 | --- | .93 | .82 | --- |
| TOTAL | 587.99 | 922.28 | 230.70 | 63.06 | 184.01 | 783.65 | 105.39 | 249.88 | 431.49 | 533.20 | 126.32 | 1046.90 |

WTR YR 1986 TOTAL 5264.87

## 05431017 DELAVAN LAKE INLET AT U.S. HIGHWAY 50 AT LAKE LAWN, WI

LOCATION.--Lat 42°37'16", long 88°34'57", in NE 1/4 sec.22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank at U.S. Highway 50 bridge, and 1.0 mi east of Lake Lawn.

DRAINAGE AREA.--21.8 $mi^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to September 1986.

GAGE.--Acoustical velocity meter and staff gage. Elevation of gage is 927 ft, from topographic map.

REMARKS.--1984 and 1985 water year discharges are unpublished, but available and were estimated based on discharges upstream at Jackson Creek at Petrie Road near Elkhorn (05431014) and Jackson Creek tributary near Elkhorn (054310157). In water year 1986, daily mean discharges less than 20 $ft^3/s$ were estimated based on discharges from upstream stations 05431014 and 054310157, and daily mean discharges of 20 $ft^3/s$ or greater are from acoustical velocity meter records. Instantaneous discharges are negative in many instances due to seiche affects caused by wind action. Records fair except estimated discharges less than 20 $ft^3/s$, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 823 $ft^3/s$ Mar. 10; minimum daily (estimated), 0.8 $ft^3/s$, Aug. 24, Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .80 | 149 | 151 | 2.6 | 6.5 | 5.6 | 12 | 4.3 | 3.3 | 26 | 1.8 | 1.2 |
| 2 | .80 | 197 | 100 | 2.5 | 6.4 | 6.4 | 9.9 | 2.8 | 2.3 | 24 | 1.6 | 1.2 |
| 3 | 1.0 | 67 | 44 | 2.4 | 5.7 | 5.9 | 12 | 2.4 | 2.2 | 17 | 1.3 | 1.1 |
| 4 | 12 | 43 | 33 | 2.4 | 58 | 7.5 | 12 | 2.6 | 2.3 | 13 | 1.2 | 1.0 |
| 5 | 6.6 | 31 | 28 | 2.3 | 121 | 8.6 | 11 | 3.3 | 20 | 11 | 1.2 | 1.0 |
| 6 | 2.2 | 34 | 25 | 2.3 | 47 | 7.5 | 9.7 | 2.7 | 11 | 50 | 15 | .80 |
| 7 | 1.6 | 36 | 22 | 2.2 | 32 | 5.9 | 8.7 | 2.0 | 8.4 | 75 | 12 | .80 |
| 8 | 3.6 | 38 | 19 | 2.2 | 24 | 5.0 | 7.3 | 1.7 | 5.9 | 35 | 8.0 | .90 |
| 9 | 49 | 45 | 17 | 2.2 | 16 | 19 | 6.4 | 1.7 | 4.0 | 36 | 5.5 | 7.5 |
| 10 | 58 | 78 | 16 | 2.1 | 11 | 633 | 5.9 | 1.7 | 9.8 | 30 | 5.0 | 15 |
| 11 | 31 | 40 | 15 | 2.1 | 8.5 | 174 | 5.6 | 1.8 | 8.3 | 36 | 3.4 | 11 |
| 12 | 38 | 43 | 13 | 2.1 | 5.8 | 108 | 5.1 | 2.8 | 5.4 | 28 | 2.3 | 7.8 |
| 13 | 37 | 47 | 11 | 2.0 | 4.6 | 164 | 4.8 | 1.9 | 3.9 | 22 | 1.9 | 4.7 |
| 14 | 21 | 45 | 9.2 | 2.0 | 4.2 | 129 | 7.9 | 2.0 | 13 | 17 | 5.7 | 3.2 |
| 15 | 13 | 44 | 8.2 | 2.0 | 3.6 | 81 | 9.1 | 4.9 | 24 | 23 | 3.6 | 2.4 |
| 16 | 8.3 | 66 | 7.3 | 2.0 | 3.4 | 74 | 9.8 | 3.9 | 15 | 40 | 2.6 | 1.9 |
| 17 | 6.9 | 53 | 6.5 | 4.8 | 3.4 | 74 | 8.2 | 39 | 9.5 | 21 | 2.0 | 1.8 |
| 18 | 12 | 124 | 5.8 | 26 | 3.5 | 104 | 7.3 | 55 | 7.4 | 15 | 1.6 | 2.2 |
| 19 | 46 | 150 | 5.2 | 45 | 7.9 | 100 | 6.8 | 23 | 6.4 | 12 | 1.4 | 1.9 |
| 20 | 31 | 84 | 4.7 | 31 | 15 | 48 | 6.2 | 15 | 4.8 | 9.3 | 1.2 | 1.7 |
| 21 | 23 | 38 | 4.4 | 24 | 12 | 37 | 6.0 | 12 | 3.9 | 7.3 | 1.1 | 7.6 |
| 22 | 20 | 29 | 4.2 | 32 | 9.3 | 34 | 4.8 | 9.0 | 6.5 | 6.3 | 1.1 | 26 |
| 23 | 28 | 24 | 4.0 | 24 | 7.9 | 35 | 4.3 | 7.4 | 3.8 | 4.7 | .90 | 38 |
| 24 | 94 | 20 | 3.7 | 16 | 7.4 | 27 | 4.2 | 6.1 | 2.6 | 3.8 | .80 | 28 |
| 25 | 37 | 18 | 3.5 | 9.9 | 6.7 | 33 | 4.1 | 5.1 | 1.9 | 9.3 | .90 | 205 |
| 26 | 30 | 21 | 3.3 | 7.1 | 7.7 | 52 | 3.9 | 4.5 | 1.7 | 5.2 | 15 | 209 |
| 27 | 24 | 18 | 3.1 | 5.8 | 6.5 | 33 | 3.2 | 12 | 185 | 3.8 | 5.0 | 113 |
| 28 | 15 | 17 | 3.1 | 4.9 | 5.6 | 27 | 3.1 | 8.4 | 66 | 6.4 | 2.8 | 86 |
| 29 | 14 | 15 | 2.9 | 4.3 | --- | 35 | 2.5 | 6.6 | 42 | 3.6 | 2.0 | 204 |
| 30 | 12 | 20 | 2.9 | 3.7 | --- | 30 | 10 | 5.5 | 29 | 2.3 | 1.5 | 137 |
| 31 | 15 | --- | 2.7 | 3.3 | --- | 13 | --- | 4.3 | --- | 2.1 | 1.3 | --- |
| TOTAL | 691.80 | 1634 | 578.7 | 277.2 | 450.6 | 2116.4 | 211.8 | 255.4 | 509.3 | 595.1 | 110.70 | 1122.70 |
| MEAN | 22.3 | 54.5 | 18.7 | 8.94 | 16.1 | 68.3 | 7.06 | 8.24 | 17.0 | 19.2 | 3.57 | 37.4 |
| MAX | 94 | 197 | 151 | 45 | 121 | 633 | 12 | 55 | 185 | 75 | 15 | 209 |
| MIN | .80 | 15 | 2.7 | 2.0 | 3.4 | 5.0 | 2.5 | 1.7 | 1.7 | 2.1 | .80 | .80 |
| CFSM | 1.02 | 2.50 | .86 | .41 | .74 | 3.13 | .32 | .38 | .78 | .88 | .16 | 1.72 |
| IN. | 1.18 | 2.79 | .99 | .47 | .77 | 3.61 | .36 | .44 | .87 | 1.02 | .19 | 1.92 |

WTR YR 1986 TOTAL 8553.70 MEAN 23.4 MAX 633 MIN .80 CFSM 1.07 IN. 14.60

## 05431017 DELAVAN LAKE INLET AT U.S. HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--
TOTAL PHOSPHORUS DISCHARGE: 1984 and 1985 water years (unpublished) to current year.

REMARKS.--Records good. Instantaneous discharges (00061) are from acoustical velocity meter records. When instantaneous discharge data are not available, estimated daily mean discharges (00060) are shown. Daily mean discharges are estimated based on discharges from upstream stations 05431014 and 054310157.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.8 mg/L May 27, 1985; minimum observed, 0.08 mg/L Jan. 24, 1985.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 1,088 lb Feb. 13, 1984; minimum daily, 1.0 lb on many days.

EXTREMES FOR CURRENT YEAR.--
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.82 mg/L Mar. 19; minimum observed, 0.09 mg/L Feb. 12.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 571 lb Mar. 11; minimum daily, 1.0 lb Oct. 1, 2.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 04... | 1035 | E12 | -- | .220 |
| 04... | 1605 | E12 | -- | .260 |
| 05... | 1030 | E6.6 | -- | .380 |
| 05... | 1145 | E6.6 | -- | .150 |
| 05... | 1610 | E6.6 | -- | .190 |
| 10... | 1035 | -- | 59 | .280 |
| 10... | 1510 | -- | 43 | .670 |
| 11... | 0840 | -- | 5.6 | .480 |
| 12... | 0745 | -- | 23 | .280 |
| 12... | 1545 | -- | 49 | .390 |
| 23... | 0800 | -- | 27 | .100 |
| NOV | | | | |
| 01... | 1000 | -- | 93 | .240 |
| 01... | 1505 | -- | 161 | .250 |
| 02... | 1200 | -- | 157 | .440 |
| 03... | 1100 | -- | 107 | .400 |
| 04... | 1000 | -- | 109 | .270 |
| 18... | 1135 | -- | 189 | .250 |
| 19... | 1335 | E150 | -- | .270 |
| 21... | 1320 | E38 | -- | .510 |
| DEC | | | | |
| 01... | 1115 | -- | 155 | .100 |
| JAN , 1986 | | | | |
| 09... | 1515 | E2.2 | -- | .110 |
| FEB | | | | |
| 06... | 1130 | -- | 47 | .280 |
| 12... | 1515 | E5.8 | -- | .090 |
| MAR | | | | |
| 10... | 0955 | -- | 801 | .380 |
| 10... | 1355 | -- | 823 | .590 |
| 11... | 1050 | -- | 125 | .610 |
| 11... | 1430 | -- | 111 | .550 |
| 12... | 1515 | -- | 99 | .580 |
| 13... | 0755 | -- | 149 | .160 |
| 18... | 1410 | -- | 112 | .200 |
| 19... | 0835 | -- | 114 | .820 |
| 19... | 1300 | -- | 110 | .450 |
| 20... | 0750 | -- | 42 | .420 |
| APR | | | | |
| 29... | 0800 | E2.5 | -- | .200 |
| 30... | 0820 | E10 | -- | .180 |
| MAY | | | | |
| 16... | 0805 | E3.9 | -- | .300 |
| 17... | 0900 | -- | 70 | .250 |
| 19... | 1440 | -- | -17 | .310 |
| 20... | 0745 | E15 | -- | .260 |
| 21... | 0730 | E12 | -- | .300 |
| JUN | | | | |
| 04... | 1415 | E2.3 | -- | .200 |
| 14... | 2020 | E13 | -- | .530 |
| JUN , 1986 | | | | |
| 15... | 0940 | E24 | -- | .640 |
| 18... | 1350 | E7.4 | -- | .160 |
| 27... | 1230 | -- | 234 | .770 |
| 27... | 1450 | -- | 226 | .510 |
| 28... | 1040 | -- | 32 | .410 |
| 28... | 1445 | -- | 28 | .370 |
| 29... | 1100 | -- | 60 | .310 |
| JUL | | | | |
| 07... | 1040 | -- | 22 | .440 |
| 09... | 1000 | -- | 37 | .560 |
| 09... | 1400 | -- | 68 | .500 |
| 11... | 1140 | -- | 1.8 | .270 |
| 11... | 1450 | -- | -90 | .270 |
| 12... | 0955 | -- | 218 | .280 |
| 12... | 1510 | -- | 147 | .310 |
| 17... | 0815 | E21 | -- | .180 |
| 22... | 1000 | E6.3 | -- | .640 |
| AUG | | | | |
| 07... | 0855 | E12 | -- | .370 |
| 07... | 1300 | E12 | -- | .370 |
| 08... | 0810 | E8.0 | -- | .310 |
| 27... | 0825 | E5.0 | -- | .570 |
| 28... | 1000 | E2.8 | -- | .420 |
| SEP | | | | |
| 10... | 0835 | E15 | -- | .270 |
| 10... | 1140 | E15 | -- | .520 |
| 10... | 1525 | E15 | -- | .370 |
| 11... | 0950 | E11 | -- | .330 |
| 11... | 1515 | E11 | -- | .220 |
| 22... | 0825 | -- | -13 | .560 |
| 23... | 0835 | -- | 17 | .370 |
| 23... | 1155 | -- | -5.0 | .170 |
| 23... | 1500 | -- | 32 | .210 |
| 24... | 0800 | -- | 11 | .210 |
| 24... | 1340 | -- | 86 | .380 |
| 25... | 0910 | -- | 216 | .480 |
| 25... | 1150 | -- | 204 | .470 |
| 25... | 1405 | -- | 110 | .300 |
| 26... | 0900 | -- | -187 | .300 |
| 26... | 1115 | -- | 303 | .470 |
| 26... | 1620 | -- | 418 | .430 |
| 27... | 1010 | -- | 137 | .390 |
| 27... | 1535 | -- | 112 | .340 |
| 28... | 0930 | -- | -6.2 | .280 |
| 28... | 1600 | -- | 47 | .270 |
| 29... | 1220 | -- | 204 | .190 |
| 29... | 1530 | -- | 221 | .450 |
| 30... | 0830 | -- | 159 | .160 |
| 30... | 1145 | -- | 136 | .320 |
| 30... | 1500 | -- | 170 | .330 |

E ESTIMATE.

05431017 DELAVAN LAKE INLET AT U.S. HIGHWAY 50 AT 1AKE LAWN, WI--CONTINUED

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | 235 | 81.50 | 1.40 | 3.50 | 3.00 | 13.00 | 4.60 | 3.60 | 35.10 | 3.90 | 1.60 |
| 2 | 1.00 | 467 | 54.00 | 1.40 | 3.50 | 3.50 | 10.70 | 3.00 | 2.50 | 31.10 | 3.50 | 1.60 |
| 3 | 1.20 | 145 | 23.80 | 1.30 | 3.10 | 3.20 | 13.00 | 2.60 | 2.40 | 20.20 | 2.80 | 1.50 |
| 4 | 15.60 | 62.70 | 17.80 | 1.30 | 125 | 4.00 | 13.00 | 2.80 | 2.50 | 14.70 | 2.60 | 1.40 |
| 5 | 8.60 | 43.50 | 15.10 | 1.20 | 392 | 4.60 | 11.90 | 3.60 | 32.40 | 11.90 | 2.60 | 1.40 |
| 6 | 2.30 | 44.10 | 13.50 | 1.20 | 71.10 | 4.00 | 10.50 | 3.60 | 14.80 | 81.00 | 32.40 | 1.10 |
| 7 | 1.60 | 42.80 | 11.90 | 1.20 | 43.20 | 3.20 | 9.40 | 2.70 | 9.10 | 178 | 24.00 | 1.10 |
| 8 | 3.70 | 41.00 | 10.30 | 1.20 | 28.50 | 2.70 | 7.90 | 2.30 | 6.40 | 94.50 | 13.40 | 1.20 |
| 9 | 63.50 | 72.90 | 9.20 | 1.20 | 16.40 | 14.00 | 6.90 | 2.30 | 4.30 | 103 | 8.90 | 10.10 |
| 10 | 150 | 168 | 8.60 | 1.10 | 9.50 | 1720 | 6.40 | 2.30 | 10.60 | 63.20 | 8.10 | 31.60 |
| 11 | 80.40 | 64.80 | 8.10 | 1.10 | 6.00 | 571 | 6.00 | 2.40 | 9.00 | 52.50 | 5.50 | 16.60 |
| 12 | 69.80 | 69.70 | 7.00 | 1.10 | 2.80 | 308 | 5.50 | 3.80 | 5.80 | 43.80 | 3.70 | 8.40 |
| 13 | 71.90 | 88.80 | 5.90 | 1.10 | 2.20 | 196 | 5.20 | 2.60 | 4.20 | 29.70 | 3.10 | 5.10 |
| 14 | 34.00 | 72.90 | 5.00 | 1.10 | 2.00 | 201 | 8.50 | 2.70 | 37.20 | 18.40 | 9.20 | 3.50 |
| 15 | 19.00 | 66.50 | 4.40 | 1.10 | 1.80 | 115 | 9.80 | 7.90 | 82.90 | 24.80 | 5.80 | 2.60 |
| 16 | 10.80 | 89.10 | 3.90 | 1.10 | 1.60 | 96.00 | 10.60 | 6.30 | 32.40 | 64.80 | 3.50 | 2.00 |
| 17 | 7.40 | 71.60 | 3.50 | 2.60 | 1.60 | 88.00 | 8.90 | 52.60 | 12.80 | 20.40 | 2.70 | 1.90 |
| 18 | 19.40 | 167 | 3.10 | 42.10 | 1.70 | 142 | 7.90 | 119 | 6.40 | 14.60 | 2.20 | 2.40 |
| 19 | 99.40 | 219 | 2.80 | 97.20 | 6.40 | 296 | 7.30 | 38.50 | 5.50 | 11.70 | 1.90 | 2.00 |
| 20 | 50.20 | 177 | 2.50 | 58.60 | 16.20 | 106 | 6.70 | 21.10 | 4.20 | 9.00 | 1.60 | 1.80 |
| 21 | 24.80 | 105 | 2.40 | 38.90 | 13.00 | 66.00 | 6.50 | 19.40 | 3.40 | 7.10 | 1.50 | 12.30 |
| 22 | 21.60 | 62.60 | 2.30 | 60.50 | 7.50 | 55.10 | 5.20 | 12.20 | 5.60 | 21.80 | 1.50 | 78.60 |
| 23 | 15.10 | 38.90 | 2.20 | 38.90 | 6.40 | 47.20 | 4.60 | 8.00 | 3.30 | 15.20 | 1.20 | 51.30 |
| 24 | 203 | 21.60 | 2.00 | 17.30 | 6.00 | 29.20 | 4.50 | 6.60 | 2.20 | 12.30 | 1.10 | 45.40 |
| 25 | 59.90 | 9.70 | 1.90 | 8.00 | 5.40 | 35.60 | 4.40 | 5.50 | 1.60 | 30.10 | 1.20 | 449 |
| 26 | 48.60 | 11.30 | 1.80 | 3.80 | 6.20 | 112 | 4.20 | 4.90 | 1.50 | 14.00 | 48.60 | 451 |
| 27 | 32.40 | 9.70 | 1.70 | 3.10 | 5.30 | 62.40 | 3.50 | 19.40 | 639 | 10.30 | 15.40 | 228 |
| 28 | 16.20 | 9.20 | 1.70 | 2.60 | 4.50 | 43.70 | 3.40 | 11.30 | 148 | 17.30 | 6.40 | 130 |
| 29 | 15.10 | 8.10 | 1.60 | 2.30 | --- | 37.80 | 2.70 | 8.90 | 70.30 | 9.70 | 3.20 | 352 |
| 30 | 13.00 | 10.80 | 1.60 | 2.00 | --- | 32.40 | 9.70 | 5.90 | 39.20 | 6.20 | 2.40 | 252 |
| 31 | 17.80 | --- | 1.50 | 1.80 | --- | 14.00 | --- | 4.60 | --- | 5.70 | 2.10 | --- |
| TOTAL | 1178.30 | 2695.30 | 312.60 | 398.80 | 792.40 | 4416.60 | 227.80 | 393.40 | 1203.10 | 1072.10 | 226.00 | 2148.50 |

WTR YR 1986 TOTAL 15064.90

## 05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DRIVE AT DELAVAN LAKE, WI

LOCATION.--43°35'08", long 88°37'19", in SE 1/4 SE 1/4 sec.32, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank at bridge on South Shore Drive, at Delavan Lake, and 0.3 mi upstream from Delavan Lake.

DRAINAGE AREA.--9.99 m.$^2$, of which 2.33 mi$^2$ is non-contributing.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 930 ft, from topographic map.

REMARKS.--Artificial weir. Estimated daily discharges Oct. 13-18, Apr. 2-3, 5-12, 23-29, May 2-17, 22-26, May 29 to June 4, June 20-25, July 30 to Aug. 5, Aug. 12-13, 17-25, Aug. 30 to Sept. 8, Sept. 15-19, and ice periods listed in rating table below. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103 ft$^3$/s Mar. 10, 1986, gage height, 7.49 ft; minimum daily discharge, 0.15 ft$^3$/s Sept. 3, 4, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft$^3$/s Mar. 10, gage height, 7.49 ft; minimum daily discharge, 0.16 ft$^3$/s Sept. 7, 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Dec. 10 to Jan. 16, Jan. 26 to Feb. 4, Feb. 10-19, and Feb. 24 to Mar. 8.)

| | | | |
|---|---|---|---|
| 5.74 | 0.21 | 6.3 | 9.3 |
| 5.8 | .47 | 6.4 | 13 |
| 5.9 | 1.2 | 6.5 | 17 |
| 6.0 | 2.4 | 6.7 | 28 |
| 6.1 | 4.1 | 6.9 | 42 |
| 6.2 | 6.4 | 7.1 | 59 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .24 | 5.4 | 6.4 | .68 | 1.1 | 1.2 | 3.0 | 2.1 | 1.1 | 1.4 | .50 | .22 |
| 2 | .22 | 12 | 8.7 | .66 | 1.6 | 1.2 | 2.7 | 1.5 | .98 | 1.4 | .45 | .21 |
| 3 | .21 | 11 | 8.8 | .64 | 1.5 | 1.3 | 2.8 | 1.2 | .90 | 1.1 | .42 | .19 |
| 4 | .58 | 8.6 | 7.6 | .60 | 3.0 | 1.2 | 2.9 | .86 | 1.0 | 1.2 | .38 | .18 |
| 5 | .56 | 7.1 | 5.7 | .58 | 8.4 | 1.4 | 2.5 | .98 | 1.6 | 1.2 | .54 | .18 |
| 6 | .49 | 6.3 | 4.1 | .56 | 10 | 1.3 | 2.2 | .88 | 1.5 | 1.5 | 1.3 | .17 |
| 7 | .47 | 4.8 | 3.6 | .54 | 7.1 | 1.2 | 1.9 | .74 | 1.5 | 1.5 | .98 | .16 |
| 8 | .68 | 4.3 | 3.1 | .52 | 5.6 | 1.0 | 1.8 | .64 | 1.8 | 1.2 | .84 | .16 |
| 9 | 1.3 | 4.2 | 2.8 | .50 | 3.9 | 2.7 | 1.7 | .58 | .98 | 1.2 | .90 | .39 |
| 10 | 2.5 | 4.8 | 2.6 | .49 | 3.0 | 58 | 1.6 | .54 | .89 | 1.4 | .87 | .86 |
| 11 | 3.1 | 4.9 | 2.4 | .45 | 2.2 | 41 | 1.5 | .58 | 1.1 | 1.5 | .91 | .68 |
| 12 | 3.6 | 4.7 | 2.2 | .47 | 1.7 | 36 | 1.5 | .70 | .83 | 1.6 | .60 | .61 |
| 13 | 4.6 | 5.0 | 2.1 | .46 | 1.5 | 32 | 1.4 | .64 | .75 | 1.3 | .45 | .71 |
| 14 | 3.0 | 5.4 | 2.0 | .45 | 1.2 | 28 | 1.6 | .60 | 1.0 | 1.8 | 1.1 | .65 |
| 15 | 2.1 | 4.6 | 1.8 | .44 | 1.0 | 26 | 1.7 | .70 | 1.4 | 3.8 | 1.1 | .54 |
| 16 | 1.5 | 4.6 | 1.7 | .60 | .86 | 21 | 1.8 | 1.0 | 1.4 | 3.4 | .74 | .42 |
| 17 | 1.2 | 4.6 | 1.6 | 1.2 | .74 | 17 | 1.8 | 2.5 | 1.3 | 2.7 | .50 | .35 |
| 18 | 1.1 | 6.5 | 1.5 | 1.5 | .66 | 14 | 1.8 | 5.0 | 2.0 | 3.1 | .45 | .32 |
| 19 | 6.2 | 7.7 | 1.4 | 2.2 | 1.0 | 12 | 1.8 | 5.3 | 1.6 | 2.9 | .38 | .32 |
| 20 | 5.2 | 6.8 | 1.3 | 2.7 | 2.1 | 9.4 | 1.7 | 5.2 | 1.2 | 2.6 | .34 | .54 |
| 21 | 3.0 | 5.9 | 1.3 | 2.4 | 2.5 | 7.5 | 1.8 | 4.2 | 1.1 | 1.9 | .31 | 1.1 |
| 22 | 2.6 | 5.4 | 1.2 | 2.7 | 2.6 | 6.2 | 1.8 | 3.0 | 1.2 | 1.4 | .28 | 1.2 |
| 23 | 2.7 | 4.2 | 1.1 | 2.7 | 2.5 | 5.5 | 1.5 | 2.5 | .90 | 1.2 | .27 | 1.2 |
| 24 | 5.3 | 3.5 | 1.0 | 2.7 | 2.0 | 4.8 | 1.4 | 2.0 | .70 | 1.2 | .25 | 2.1 |
| 25 | 5.6 | 3.3 | 1.0 | 2.5 | 1.7 | 4.1 | 1.3 | 1.7 | .64 | 1.2 | .24 | 9.0 |
| 26 | 4.5 | 3.0 | .94 | 2.1 | 1.5 | 4.8 | 1.2 | 2.0 | 1.3 | 1.1 | .40 | 8.8 |
| 27 | 3.7 | 2.9 | .90 | 1.6 | 1.7 | 5.6 | 1.1 | 3.0 | 1.8 | 1.0 | .79 | 10 |
| 28 | 3.0 | 2.7 | .82 | 1.3 | 1.4 | 5.1 | 1.0 | 2.7 | 1.2 | 1.1 | .41 | 8.7 |
| 29 | 2.6 | 2.5 | .80 | 1.1 | --- | 3.9 | .98 | 1.8 | 2.2 | 1.3 | .29 | 9.2 |
| 30 | 2.3 | 2.4 | .76 | 1.0 | --- | 3.4 | 2.1 | 1.9 | 1.6 | .70 | .25 | 10 |
| 31 | 2.2 | --- | .71 | .90 | --- | 3.8 | --- | 1.2 | --- | .60 | .23 | --- |
| TOTAL | 76.35 | 159.1 | 81.93 | 37.27 | 74.06 | 361.6 | 53.88 | 58.24 | 37.47 | 50.50 | 17.47 | 69.16 |
| MEAN | 2.46 | 5.30 | 2.64 | 1.20 | 2.65 | 11.7 | 1.80 | 1.88 | 1.25 | 1.63 | .56 | 2.31 |
| MAX | 6.2 | 12 | 8.8 | 2.7 | 10 | 58 | 3.0 | 5.3 | 2.2 | 3.8 | 1.3 | 10 |
| MIN | .21 | 2.4 | .71 | .44 | .66 | 1.0 | .98 | .54 | .64 | .60 | .23 | .16 |
| CFSM | .25 | .53 | .26 | .12 | .27 | 1.17 | .18 | .19 | .13 | .16 | .06 | .23 |
| IN. | .28 | .59 | .31 | .14 | .28 | 1.35 | .20 | .22 | .14 | .19 | .07 | .26 |

CAL YR 1985 TOTAL 671.93 MEAN 1.84 MAX 15 MIN .15 CFSM .18 IN 2.50
WTR YR 1986 TOTAL 1077.03 MEAN 2.95 MAX 58 MIN .16 CFSM .30 IN 4.01

## 423526088380101 DELAVAN LAKE AT SW END NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'26", long 88°38'01", sec.32, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi$^2$.

PERIOD OF RECORD.--October 1983 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TRANSPARENCY (SECCHI DISK) (M) (00078) | OXYGEN, DISSOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 23... | 1115 | -- | -- | -- | -- | -- | 1.00 | -- |
| 23... | 1120 | 30.5 | 4.97 | 520 | 8.10 | 13.5 | -- | 7.9 |
| 23... | 1125 | 3.00 | 4.97 | 520 | 8.10 | 13.5 | -- | 7.9 |
| NOV | | | | | | | | |
| 21... | 1140 | -- | -- | -- | -- | -- | 1.20 | -- |
| 21... | 1145 | 3.00 | 5.10 | 520 | 8.40 | 6.5 | -- | 11.1 |
| 21... | 1150 | 31.5 | 5.10 | 520 | 8.40 | 6.5 | -- | 10.9 |
| JAN , 1986 | | | | | | | | |
| 09... | 1250 | 3.00 | 4.22 | 520 | 8.50 | 1.0 | -- | 11.7 |
| 09... | 1255 | 30.5 | 4.22 | 540 | 8.30 | 2.0 | -- | 10.7 |
| FEB | | | | | | | | |
| 12... | 1250 | 30.5 | 4.56 | 550 | 8.40 | 2.5 | -- | 10.9 |
| 12... | 1255 | 3.00 | 4.56 | 530 | 9.80 | 1.5 | -- | 11.5 |
| MAR | | | | | | | | |
| 20... | 1115 | 28.5 | 5.24 | 540 | 8.10 | 3.0 | -- | 9.2 |
| 20... | 1120 | 3.00 | 5.24 | 550 | 8.60 | 3.0 | -- | 10.5 |
| APR | | | | | | | | |
| 29... | 1050 | -- | -- | -- | -- | -- | 1.60 | -- |
| 29... | 1055 | 3.00 | 4.66 | 520 | 8.70 | 11.0 | -- | 10.4 |
| 29... | 1100 | 30.5 | 4.66 | 530 | 8.70 | 10.5 | -- | 9.7 |
| MAY | | | | | | | | |
| 19... | 1110 | -- | -- | -- | -- | -- | 2.50 | -- |
| 19... | 1115 | 30.5 | 5.12 | 530 | 8.60 | 15.5 | -- | 8.4 |
| 19... | 1120 | 3.00 | 5.12 | 530 | 8.50 | 15.5 | -- | 8.9 |
| JUN | | | | | | | | |
| 04... | 1010 | -- | -- | -- | -- | -- | 2.80 | -- |
| 04... | 1015 | 30.5 | 5.02 | 530 | 8.70 | 17.0 | -- | 9.0 |
| 04... | 1020 | 3.00 | 5.02 | 530 | 8.90 | 18.5 | -- | 11.4 |
| 23... | 1025 | -- | -- | -- | -- | -- | 1.70 | -- |
| 23... | 1030 | 3.00 | 5.12 | 518 | 9.00 | 22.0 | -- | 12.2 |
| 23... | 1040 | 29.5 | 5.12 | 553 | 8.10 | 17.0 | -- | .5 |
| 23... | 1050 | 24.0 | 5.12 | 535 | 8.70 | 20.5 | -- | 7.4 |

| DATE | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | CHLOR-A PHYTOPLANKTON CHROMO FLUOPOM (UG/L) (70953) | CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| OCT , 1985 | | | | | |
| 23... | -- | -- | -- | -- | -- |
| 23... | .151 | -- | .100 | -- | -- |
| 23... | .137 | -- | .095 | 5.00 | .60 |
| NOV | | | | | |
| 21... | -- | -- | -- | -- | -- |
| 21... | .126 | .088 | -- | 14.0 | .50 |
| 21... | .155 | .090 | -- | -- | -- |
| JAN , 1986 | | | | | |
| 09... | .097 | .094 | -- | .800 | <.10 |
| 09... | .093 | .091 | -- | -- | -- |
| FEB | | | | | |
| 12... | .127 | .130 | -- | -- | -- |
| 12... | .113 | .110 | -- | 3.90 | 1.70 |
| MAR | | | | | |
| 20... | .108 | -- | .090 | -- | -- |
| 20... | .136 | -- | .077 | 17.0 | 2.80 |
| APR | | | | | |
| 29... | -- | -- | -- | -- | -- |
| 29... | .071 | -- | .033 | 7.60 | .30 |
| 29... | .088 | -- | .035 | -- | -- |
| MAY | | | | | |
| 19... | -- | -- | -- | -- | -- |
| 19... | .096 | -- | .058 | -- | -- |
| 19... | .077 | -- | .055 | 8.10 | 1.40 |
| JUN | | | | | |
| 04... | -- | -- | -- | -- | -- |
| 04... | .058 | -- | .041 | -- | -- |
| 04... | .050 | -- | .025 | 19.0 | 2.30 |
| 23... | -- | -- | -- | -- | -- |
| 23... | .068 | -- | .012 | 36.0 | 1.70 |
| 23... | .139 | -- | .098 | -- | -- |
| 23... | .083 | -- | .041 | -- | -- |

## 423526088380101 DELAVAN LAKE AT SW END NEAR DELAVAN LAKE, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TRANS-PAR-ENCY (SECCHI DISK) (M) (00078) | OXYGEN, DIS-SOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| JUL , 1986 | | | | | | | | |
| 08... | 1105 | -- | -- | -- | -- | -- | .80 | -- |
| 08... | 1110 | 3.00 | -- | 500 | 8.90 | 23.5 | -- | 12.5 |
| 08... | 1155 | 29.5 | 5.15 | 530 | 8.40 | 21.0 | -- | 4.7 |
| 22... | 1305 | -- | -- | -- | -- | -- | .80 | -- |
| 22... | 1310 | 30.5 | 5.06 | 530 | 8.10 | 22.5 | -- | 1.2 |
| 22... | 1315 | 21.0 | 5.06 | 510 | 8.30 | 24.0 | -- | 3.5 |
| 22... | 1320 | 3.00 | 5.06 | 440 | 9.40 | 27.5 | -- | 17.5 |
| AUG | | | | | | | | |
| 05... | 1045 | -- | -- | -- | -- | -- | 1.00 | -- |
| 05... | 1050 | 3.00 | 4.96 | 462 | 9.10 | 25.0 | -- | 7.6 |
| 05... | 1055 | 24.0 | 4.96 | 480 | 8.60 | 24.0 | -- | 2.0 |
| 05... | 1100 | 30.5 | 4.96 | 530 | 8.10 | 21.5 | -- | .0 |
| 27... | 1305 | -- | -- | -- | -- | -- | 1.00 | -- |
| 27... | 1310 | 3.00 | 5.08 | 500 | 8.60 | 22.5 | -- | 7.6 |
| 27... | 1315 | 30.5 | 5.08 | 490 | 8.00 | 22.5 | -- | 7.8 |
| SEP | | | | | | | | |
| 11... | 1040 | -- | -- | -- | -- | -- | 1.20 | -- |
| 11... | 1045 | 30.5 | 5.10 | 500 | 8.50 | 20.0 | -- | 2.4 |
| 11... | 1050 | 21.0 | 5.10 | 490 | 8.60 | 21.0 | -- | 6.0 |
| 11... | 1055 | 3.00 | 5.10 | 490 | 8.50 | 20.0 | -- | 6.4 |
| 24... | 1120 | -- | -- | -- | -- | -- | 1.20 | -- |
| 24... | 1125 | 30.5 | 5.00 | 490 | 8.00 | 18.5 | -- | 6.7 |
| 24... | 1130 | 3.00 | 5.00 | 490 | 8.60 | 19.0 | -- | 8.4 |

| DATE | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| JUL , 1986 | | | | | |
| 08... | -- | -- | -- | -- | -- |
| 08... | .063 | -- | .048 | 160 | 3.40 |
| 08... | .067 | -- | .046 | -- | -- |
| 22... | -- | -- | -- | -- | -- |
| 22... | .060 | -- | .039 | -- | -- |
| 22... | .034 | -- | .005 | -- | -- |
| 22... | .064 | -- | .004 | 200 | 2.40 |
| AUG | | | | | |
| 05... | -- | -- | -- | -- | -- |
| 05... | .057 | -- | .004 | 32.0 | .70 |
| 05... | .059 | -- | .007 | -- | -- |
| 05... | .103 | -- | .058 | -- | -- |
| 27... | -- | -- | -- | -- | -- |
| 27... | .064 | -- | .021 | 38.0 | .70 |
| 27... | .062 | -- | .017 | -- | -- |
| SEP | | | | | |
| 11... | -- | -- | -- | -- | -- |
| 11... | .117 | -- | .073 | -- | -- |
| 11... | .086 | -- | .044 | -- | -- |
| 11... | .108 | -- | .049 | 35.0 | .70 |
| 24... | -- | -- | -- | -- | -- |
| 24... | .179 | -- | .042 | -- | -- |
| 24... | .100 | -- | .043 | 19.0 | .50 |

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TRANS-PAR-ENCY (SECCHI DISK) (M) (00078) | OXYGEN, DIS-SOLVED (MG/L) (00300) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | |
| 29... | 1050 | -- | -- | -- | -- | -- | 1.60 | -- | -- | -- |
| 29... | 1055 | 3.00 | 4.66 | 520 | 8.70 | 11.0 | -- | 10.4 | <.1 | 1.0 |
| 29... | 1100 | 30.5 | 4.66 | 530 | 8.70 | 10.5 | -- | 9.7 | .2 | 1.0 |

| DATE | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITRO-GEN, TOTAL (MG/L AS N) (00600) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .100 | .70 | .80 | 1.8 | .071 | -- | .031 | 7.60 | .30 |
| 29... | .100 | .70 | .80 | 1.8 | .088 | -- | .035 | -- | -- |

## 423560088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'60", long 88°36'50", sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi$^2$.

PERIOD OF RECORD.--October 1983 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TRANS-PAR-ENCY (SECCHI DISK) (M) (00078) | OXYGEN, DIS-SOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 23... | 1140 | -- | -- | -- | -- | -- | 1.20 | -- |
| 23... | 1145 | 52.5 | 4.97 | 520 | 8.10 | 13.0 | -- | 6.7 |
| 23... | 1150 | 32.0 | 4.97 | 520 | 8.10 | 13.5 | -- | 8.0 |
| 23... | 1155 | 3.00 | 4.97 | 510 | 8.20 | 13.5 | -- | 8.2 |
| NOV | | | | | | | | |
| 21... | 1110 | -- | -- | -- | -- | -- | 1.00 | -- |
| 21... | 1115 | 3.00 | 5.10 | 520 | 8.40 | 6.5 | -- | 11.0 |
| 21... | 1120 | 33.0 | 5.10 | -- | 8.40 | 6.5 | -- | 10.8 |
| 21... | 1125 | 51.5 | 5.10 | 520 | 8.30 | 6.5 | -- | 10.7 |
| JAN , 1986 | | | | | | | | |
| 09... | 1150 | 51.5 | 4.22 | -- | -- | -- | -- | -- |
| 09... | 1155 | 33.0 | 4.22 | -- | -- | -- | -- | -- |
| 09... | 1200 | 3.00 | 4.22 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | |
| 12... | 1400 | 51.5 | 4.56 | 760 | 7.90 | -- | -- | .9 |
| 12... | 1405 | 33.0 | 4.56 | 550 | 9.00 | 3.0 | -- | 6.7 |
| 12... | 1410 | 3.00 | 4.56 | 530 | 9.00 | 1.5 | -- | 11.1 |
| MAR | | | | | | | | |
| 20... | 1335 | 50.5 | 5.24 | 760 | 7.60 | 4.0 | -- | .8 |
| 20... | 1340 | 30.0 | 5.24 | 720 | 7.60 | 4.0 | -- | .1 |
| 20... | 1345 | 3.00 | 5.24 | 510 | 8.40 | 3.0 | -- | 10.0 |
| APR | | | | | | | | |
| 29... | 1200 | -- | -- | -- | -- | -- | 1.60 | -- |
| 29... | 1205 | 52.5 | 4.66 | 530 | 8.70 | 10.5 | -- | 10.1 |
| 29... | 1210 | 33.0 | 4.66 | 530 | 8.80 | 11.0 | -- | 10.6 |
| 29... | 1215 | 3.00 | 4.66 | 520 | 3.80 | 11.5 | -- | 11.3 |
| MAY | | | | | | | | |
| 19... | 1155 | -- | -- | -- | -- | -- | 3.2 | -- |
| 19... | 1200 | 52.5 | 5.12 | 550 | 7.80 | -- | -- | .4 |
| 19... | 1205 | 36.0 | 5.12 | 530 | 8.50 | -- | -- | 8.2 |
| 19... | 1212 | 3.00 | 5.12 | 530 | 8.50 | -- | -- | 9.2 |

| DATE | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| OCT , 1985 | | | | | |
| 23... | -- | -- | -- | -- | -- |
| 23... | .161 | -- | .100 | -- | -- |
| 23... | .130 | -- | .089 | -- | -- |
| 23... | .145 | -- | .095 | 7.10 | .90 |
| NOV | | | | | |
| 21... | -- | -- | -- | -- | -- |
| 21... | .119 | .086 | -- | 24.0 | 1.50 |
| 21... | .132 | .084 | -- | -- | -- |
| 21... | .136 | .074 | -- | -- | -- |
| JAN , 1986 | | | | | |
| 09... | .300 | .270 | -- | -- | -- |
| 09... | .114 | .107 | -- | -- | -- |
| 09... | .119 | .094 | -- | 6.80 | 2.30 |
| FEB | | | | | |
| 12... | .320 | .300 | -- | -- | -- |
| 12... | .192 | .180 | -- | -- | -- |
| 12... | .116 | .100 | -- | 1.70 | .50 |
| MAR | | | | | |
| 20... | .290 | -- | .230 | -- | -- |
| 20... | .193 | -- | .178 | -- | -- |
| 20... | .156 | -- | .109 | 15.0 | 3.10 |
| APR | | | | | |
| 29... | -- | -- | -- | -- | -- |
| 29... | .081 | -- | .033 | -- | -- |
| 29... | .079 | -- | .029 | -- | -- |
| 29... | .073 | -- | .029 | 9.50 | .30 |
| MAY | | | | | |
| 19... | -- | -- | -- | -- | -- |
| 19... | .240 | -- | .182 | -- | -- |
| 19... | .083 | -- | .060 | -- | -- |
| 19... | .088 | -- | .057 | 7.70 | .50 |

423560088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TRANSPARENCY (SECCHI DISK) (M) (00078) | OXYGEN, DISSOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| JUN , 1986 | | | | | | | | |
| 04... | 1050 | -- | -- | -- | -- | -- | 2.60 | -- |
| 04... | 1055 | 52.5 | 5.02 | 560 | 7.90 | 14.0 | -- | .0 |
| 04... | 1100 | 3.00 | 5.02 | 520 | 9.30 | 19.0 | -- | 12.7 |
| 04... | 1120 | 33.0 | 5.02 | 520 | 8.50 | 16.0 | -- | 6.3 |
| 23... | 0945 | -- | -- | -- | -- | -- | 1.60 | -- |
| 23... | 0950 | 3.00 | 5.12 | 512 | 9.00 | 22.5 | -- | 12.5 |
| 23... | 1005 | 30.0 | 5.12 | 539 | 8.60 | 19.5 | -- | 6.4 |
| 23... | 1010 | 45.0 | 5.12 | 572 | 8.00 | 15.0 | -- | .2 |
| JUL | | | | | | | | |
| 08... | 1225 | -- | -- | -- | -- | -- | 1.20 | -- |
| 08... | 1230 | 51.5 | 5.15 | 590 | 7.60 | 15.0 | -- | .0 |
| 08... | 1235 | 33.0 | 5.15 | 530 | 8.20 | 19.5 | -- | 3.6 |
| 08... | 1240 | 3.00 | 5.15 | 500 | 8.90 | 23.5 | -- | 10.0 |
| 22... | 1350 | -- | -- | -- | -- | -- | .80 | -- |
| 22... | 1355 | 52.5 | 5.06 | 600 | 7.40 | 16.0 | -- | .0 |
| 22... | 1357 | 36.0 | 5.06 | 540 | 8.00 | 21.0 | -- | .2 |
| 22... | 1400 | 18.0 | 5.06 | 500 | 8.50 | 25.0 | -- | 4.9 |
| 22... | 1405 | 3.00 | 5.06 | 450 | 9.30 | 28.0 | -- | 15.2 |
| AUG | | | | | | | | |
| 05... | 1140 | -- | -- | -- | -- | -- | .70 | -- |
| 05... | 1145 | 3.00 | 4.96 | 460 | 9.20 | 25.0 | -- | 9.0 |
| 05... | 1150 | 27.0 | 4.96 | 500 | 8.20 | 22.0 | -- | .2 |
| 05... | 1155 | 42.0 | 4.96 | 560 | 7.80 | 18.0 | -- | .0 |
| 05... | 1200 | 52.5 | 4.96 | 600 | 7.70 | 16.5 | -- | .0 |
| 27... | 1355 | -- | -- | -- | -- | -- | 1.20 | -- |
| 27... | 1400 | 3.00 | 5.08 | 490 | 8.80 | 22.5 | -- | 7.2 |
| 27... | 1405 | 36.0 | 5.08 | 490 | 8.80 | 22.5 | -- | 6.3 |
| 27... | 1410 | 42.0 | 5.08 | 570 | 7.70 | 19.5 | -- | .2 |
| 27... | 1415 | 52.5 | 5.08 | 630 | 7.40 | 16.5 | -- | .0 |
| SEP | | | | | | | | |
| 11... | 1130 | 52.0 | 5.10 | 580 | 7.70 | 18.5 | -- | .0 |
| 11... | 1135 | 45.0 | 5.10 | 500 | 8.70 | 20.0 | -- | 5.4 |
| 11... | 1140 | 33.0 | 5.10 | 490 | 8.80 | 20.0 | -- | 6.4 |
| 11... | 1145 | 3.00 | 5.10 | 490 | 8.80 | 20.0 | -- | 7.0 |
| 24... | 1200 | -- | -- | -- | -- | -- | 1.20 | -- |
| 24... | 1205 | 52.5 | 5.00 | 520 | 8.20 | 18.0 | -- | .0 |
| 24... | 1210 | 32.0 | 5.00 | 490 | 8.90 | 18.5 | -- | 6.5 |
| 24... | 1215 | 3.00 | 5.00 | 490 | 8.90 | 19.0 | -- | 8.3 |

| DATE | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| JUN , 1986 | | | | | |
| 04... | -- | -- | -- | -- | -- |
| 04... | .250 | -- | .200 | -- | -- |
| 04... | .049 | -- | .024 | 17.0 | 2.00 |
| 04... | .089 | -- | .074 | -- | -- |
| 23... | -- | -- | -- | -- | -- |
| 23... | .073 | -- | .008 | 53.0 | 1.70 |
| 23... | .091 | -- | .050 | -- | -- |
| 23... | .340 | -- | .270 | -- | -- |
| 23... | .390 | -- | .310 | -- | -- |
| JUL | | | | | |
| 08... | -- | -- | -- | -- | -- |
| 08... | .610 | -- | .560 | -- | -- |
| 08... | .070 | -- | .061 | -- | -- |
| 08... | .067 | -- | .010 | 42.0 | 1.00 |
| 22... | -- | -- | -- | -- | -- |
| 22... | .540 | -- | .490 | -- | -- |
| 22... | .144 | -- | .115 | -- | -- |
| 22... | .050 | -- | .004 | -- | -- |
| 22... | .060 | -- | .005 | 83.0 | 1.90 |
| AUG | | | | | |
| 05... | -- | -- | -- | -- | -- |
| 05... | .074 | -- | .005 | 55.0 | .90 |
| 05... | .064 | -- | .026 | -- | -- |
| 05... | .370 | -- | .370 | -- | -- |
| 05... | .600 | -- | .640 | -- | -- |
| 27... | -- | -- | -- | -- | -- |
| 27... | .068 | -- | .023 | 33.0 | .70 |
| 27... | .071 | -- | .025 | -- | -- |
| 27... | .610 | -- | .460 | -- | -- |
| 27... | .910 | -- | .770 | -- | -- |
| SEP | | | | | |
| 11... | .530 | -- | .470 | -- | -- |
| 11... | .095 | -- | .046 | -- | -- |
| 11... | .096 | -- | .045 | -- | -- |
| 11... | .136 | -- | .044 | 54.0 | .80 |
| 24... | -- | -- | -- | -- | -- |
| 24... | .250 | -- | .150 | -- | -- |
| 24... | .175 | -- | .048 | -- | -- |
| 24... | .090 | -- | .042 | 21.0 | .50 |

## 423560088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TRANSPARENCY (SECCHI DISK) (M) (00078) | OXYGEN, DISSOLVED (MG/L) (00300) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | |
| 29... | 1200 | -- | -- | -- | -- | -- | 1.60 | -- | -- | -- |
| 29... | 1205 | 52.5 | 4.66 | 530 | 8.70 | 10.5 | -- | 10.1 | <.1 | 1.0 |
| 29... | 1210 | 33.0 | 4.66 | 530 | 8.80 | 11.0 | -- | 10.6 | -- | -- |
| 29... | 1215 | 3.00 | 4.66 | 520 | 8.80 | 11.5 | -- | 11.3 | <.1 | 1.0 |

| DATE | NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610) | NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITROGEN, TOTAL (MG/L AS N) (00600) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .090 | .81 | .90 | 1.9 | .081 | -- | .033 | -- | -- |
| 29... | -- | -- | -- | -- | .079 | -- | .029 | -- | -- |
| 29... | .060 | .74 | .80 | 1.8 | .073 | -- | .029 | 9.50 | .30 |

## 423659088354401 DELAVAN LAKE AT NORTH END NEAR LAKE LAWN, WI

LOCATION.--Lat 42°36'59", long 88°35'44", sec.22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi$^2$.

PERIOD OF RECORD.--October 1983 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | TRANS-PAR-ENCY (SECCHI DISK) (M) (00078) | OXYGEN, DIS-SOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | |
| 23... | 1045 | -- | -- | -- | -- | -- | 1.00 | -- |
| 23... | 1050 | 30.5 | 4.97 | 520 | 8.10 | 13.5 | -- | 8.1 |
| 23... | 1055 | 3.00 | 4.97 | 520 | 8.20 | 13.5 | -- | 8.3 |
| NOV | | | | | | | | |
| 21... | 1025 | -- | -- | -- | -- | -- | 1.00 | -- |
| 21... | 1030 | 3.00 | 5.10 | 520 | 8.70 | 6.0 | -- | 11.1 |
| 21... | 1035 | 31.5 | 5.10 | 510 | 8.50 | 6.0 | -- | 11.0 |
| JAN , 1986 | | | | | | | | |
| 09... | 1115 | 30.5 | 4.22 | 540 | -- | 1.5 | -- | 11.3 |
| 09... | 1120 | 3.00 | 4.22 | 520 | -- | 1.0 | -- | 11.5 |
| FEB | | | | | | | | |
| 12... | 1435 | 30.5 | 4.56 | 550 | 8.20 | 2.5 | -- | 10.7 |
| 12... | 1440 | 3.00 | 4.56 | 510 | 8.30 | 1.5 | -- | 9.7 |
| MAR | | | | | | | | |
| 20... | 1445 | 30.5 | -- | 560 | 8.20 | 2.5 | -- | 8.2 |
| 20... | 1450 | 3.00 | 5.24 | 500 | 8.50 | 3.0 | -- | 10.8 |
| APR | | | | | | | | |
| 29... | 1245 | -- | -- | -- | -- | -- | 1.00 | -- |
| 29... | 1250 | 31.5 | 4.66 | 530 | 9.00 | 12.0 | -- | 11.3 |
| 29... | 1255 | 3.00 | 4.66 | 510 | 9.60 | 12.5 | -- | 11.1 |
| MAY | | | | | | | | |
| 19... | 1205 | -- | -- | -- | -- | -- | 2.20 | -- |
| 19... | 1230 | 30.5 | 5.12 | 540 | 8.20 | 14.0 | -- | 5.6 |
| 19... | 1235 | 3.00 | 5.12 | 530 | 8.40 | 15.0 | -- | 8.3 |
| JUN | | | | | | | | |
| 04... | 1130 | -- | -- | -- | -- | -- | 1.40 | -- |
| 04... | 1135 | 30.5 | 5.02 | 550 | 8.20 | 15.5 | -- | 2.8 |
| 04... | 1140 | 3.00 | 5.02 | 520 | 9.10 | 19.0 | -- | 13.6 |
| 04... | 1150 | 27.0 | 5.02 | 550 | 8.20 | 15.5 | -- | 4.0 |
| 23... | 0840 | -- | -- | -- | -- | -- | 1.50 | -- |
| 23... | 0845 | 3.00 | 5.12 | 511 | 9.00 | 22.0 | -- | 11.5 |
| 23... | 0915 | 24.0 | 5.12 | 522 | 8.80 | 21.5 | -- | 9.6 |
| 23... | 0920 | 28.5 | 5.12 | 548 | 8.40 | 18.5 | -- | 4.6 |

| DATE | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| OCT , 1985 | | | | | |
| 23... | -- | -- | -- | -- | -- |
| 23... | .121 | -- | .083 | -- | -- |
| 23... | .135 | -- | .091 | 9.50 | 1.20 |
| NOV | | | | | |
| 21... | -- | -- | -- | -- | -- |
| 21... | .125 | .091 | -- | 11.0 | .40 |
| 21... | .129 | .087 | -- | -- | -- |
| JAN , 1986 | | | | | |
| 09... | .101 | .086 | -- | -- | -- |
| 09... | .107 | .090 | -- | 1.40 | .20 |
| FEB | | | | | |
| 12... | .105 | .100 | .077 | -- | -- |
| 12... | .125 | .120 | -- | 3.30 | 1.60 |
| MAR | | | | | |
| 20... | .105 | -- | .093 | -- | -- |
| 20... | .167 | -- | .105 | 21.0 | 2.80 |
| APR | | | | | |
| 29... | -- | -- | -- | -- | -- |
| 29... | .106 | -- | .019 | -- | -- |
| 29... | .065 | -- | .017 | 23.0 | .60 |
| MAY | | | | | |
| 19... | -- | -- | -- | -- | -- |
| 19... | .137 | -- | .083 | -- | -- |
| 19... | .090 | -- | .064 | 4.40 | 1.00 |
| JUN | | | | | |
| 04... | -- | -- | -- | -- | -- |
| 04... | .140 | -- | .123 | -- | -- |
| 04... | .092 | -- | .028 | 62.0 | 4.20 |
| 04... | .110 | -- | .088 | -- | -- |
| 23... | -- | -- | -- | -- | -- |
| 23... | .072 | -- | .017 | 44.0 | 1.70 |
| 23... | .069 | -- | .030 | -- | -- |
| 23... | .125 | -- | .060 | -- | -- |

423659088354401 DELAVAN LAKE AT NORTH END NEAR LAKE LAWN, WI--CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TRANSPARENCY (SECCHI DISK) (M) (00078) | OXYGEN, DISSOLVED (MG/L) (00300) |
|---|---|---|---|---|---|---|---|---|
| JUL , 1986 | | | | | | | | |
| 08... | 1105 | -- | -- | -- | -- | -- | .50 | -- |
| 08... | 1110 | 31.5 | 5.15 | 530 | 8.50 | 21.5 | -- | 5.8 |
| 08... | 1300 | 3.00 | 5.15 | 480 | 8.90 | 24.0 | -- | 11.2 |
| 22... | 1420 | -- | -- | -- | -- | -- | .80 | -- |
| 22... | 1425 | 3.00 | 5.06 | 450 | 9.30 | 27.5 | -- | 16.2 |
| 22... | 1430 | 21.0 | 5.06 | 500 | 8.40 | 23.5 | -- | 3.3 |
| 22... | 1455 | 30.5 | 5.06 | 530 | 8.20 | 21.0 | -- | .3 |
| AUG | | | | | | | | |
| 05... | 1240 | -- | -- | -- | -- | -- | .70 | -- |
| 05... | 1245 | 3.00 | 4.96 | 450 | 9.30 | 25.5 | -- | 10.4 |
| 05... | 1250 | 30.5 | 4.96 | 520 | -- | 22.0 | -- | .4 |
| 27... | 1425 | -- | -- | -- | -- | -- | 1.00 | -- |
| 27... | 1430 | 3.00 | 5.08 | 500 | 8.80 | 22.5 | -- | 6.3 |
| 27... | 1435 | 30.5 | 5.08 | 520 | 8.00 | 22.0 | -- | .0 |
| SEP | | | | | | | | |
| 11... | 1200 | -- | -- | -- | -- | -- | .60 | -- |
| 11... | 1205 | 30.5 | 5.10 | 490 | 8.90 | 20.0 | -- | 7.7 |
| 11... | 1210 | 18.0 | 5.10 | 480 | 8.90 | 20.5 | -- | 8.2 |
| 11... | 1215 | 3.00 | 5.10 | 480 | 8.90 | 20.5 | -- | 8.1 |
| 24... | 1235 | -- | -- | -- | -- | -- | .80 | -- |
| 24... | 1240 | 30.5 | 5.00 | 500 | -- | 18.5 | -- | 5.4 |
| 24... | 1245 | 3.00 | 5.00 | 490 | 8.90 | 19.0 | -- | 9.8 |

| DATE | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|
| JUL , 1986 | | | | | |
| 08... | -- | -- | -- | -- | -- |
| 08... | .144 | -- | .009 | -- | -- |
| 08... | .153 | -- | .004 | 170 | 3.40 |
| 22... | -- | -- | -- | -- | -- |
| 22... | .050 | -- | .007 | 150 | 3.50 |
| 22... | .007 | -- | .011 | -- | -- |
| 22... | .103 | -- | .079 | -- | -- |
| AUG | | | | | |
| 05... | -- | -- | -- | -- | -- |
| 05 .. | .104 | -- | .005 | 59.0 | .70 |
| 05... | .130 | -- | .092 | -- | -- |
| 27... | -- | -- | -- | -- | -- |
| 27... | .075 | -- | .035 | 22.0 | .60 |
| 27... | .151 | -- | .140 | -- | -- |
| SEP | | | | | |
| 11. . | -- | -- | -- | -- | -- |
| 11. . | .102 | -- | .034 | -- | -- |
| 11... | .132 | -- | .034 | -- | -- |
| 11... | .111 | -- | .035 | 62.0 | .80 |
| 24... | -- | -- | -- | -- | -- |
| 24... | .209 | -- | .062 | -- | -- |
| 24... | .160 | -- | .033 | 54.0 | 1 .30 |

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | LAKE STAGE (FT ABOVE DATUM) (00065) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | TRANSPARENCY (SECCHI DISK) (M) (00078) | OXYGEN, DISSOLVED (MG/L) (00300) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | |
| 29... | 1245 | -- | -- | -- | -- | -- | 1.00 | -- | -- | -- |
| 29... | 1250 | 31.5 | 4.66 | 530 | 9.00 | 12.0 | -- | 11.3 | <.1 | .90 |
| 29... | 1255 | 3.00 | 4.66 | 510 | 9.60 | 12.5 | -- | 11.1 | <.1 | .90 |

| DATE | NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610) | NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITROGEN, TOTAL (MG/L AS N) (00600) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) | PHOSPHORUS, DISSOLVED (MG/L AS P) (00666) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953) | CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954) |
|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .030 | .97 | 1.0 | 1.9 | .106 | -- | .019 | -- | -- |
| 29... | .030 | .77 | .80 | 1.7 | .065 | -- | .017 | 23.0 | .60 |

## 423706088363400 DELAVAN LAKE NEAR DELAVAN, WI

**LOCATION.**--Lat 42°37'06", long 88°36'34", in SW 1/4 NE 1/4 sec.21, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, at upstream right wingwall of bridge, on North Shore Drive, 0.7 mi northeast of outlet, and 2.0 mi southeast of Delavan.

**DRAINAGE AREA.**--41.4 mi$^2$, of which 2.3 mi$^2$ is non-contributing.

**PERIOD OF RECORD.**--October 1983 to current year. October 1983 to September 1985 data published in Water Resources Investigation series report "Water Quality and Hydrology of Delavan Lake in Southeastern Wisconsin" by Stephen J. Field (in preparation).

**GAGE.**--Staff gage read by Delavan Lake Sanitary District personnel. Datum of gage is 922.92 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Lake was ice covered from December 21 to March 28. Lake levels controlled by Town of Delavan. Lake levels drawn down about 0.75 ft during winter operation from October to May.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum gage height observed, 5.85 ft, Sept. 30, 1986; minimum observed, 3.78 ft, Dec. 9, 1983.

**EXTREMES FOR CURRENT YEAR.**--Maximum gage height observed, 5.85 ft, Sept. 30; minimum observed, 4.20 ft, Jan. 9-17, 19-20.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.92 | 5.02 | 4.72 | --- | --- | 4.34 | 4.80 | 4.78 | 5.06 | 5.15 | 5.06 | 5.00 |
| 2 | 4.90 | 5.40 | 4.81 | --- | 4.28 | 4.30 | 4.80 | 4.80 | 5.06 | 5.08 | 5.06 | 5.00 |
| 3 | 4.88 | 5.46 | 4.90 | 4.22 | 4.26 | 4.28 | 4.72 | 4.80 | 5.06 | 5.05 | 5.06 | 4.98 |
| 4 | 4.90 | 5.42 | 4.88 | --- | 4.30 | 4.28 | 4.86 | 4.80 | 5.06 | 5.05 | 4.96 | 4.98 |
| 5 | 4.96 | 5.39 | 4.84 | --- | 4.50 | 4.27 | 4.73 | 4.80 | 5.10 | 4.98 | 4.96 | 4.98 |
| 6 | 4.96 | 5.34 | 4.79 | 4.22 | 4.55 | 4.28 | 4.68 | 4.82 | 5.10 | 4.98 | 5.00 | 4.97 |
| 7 | 4.96 | 5.29 | 4.80 | 4.21 | 4.55 | 4.27 | 4.68 | 4.84 | 5.08 | 5.14 | 5.00 | 4.97 |
| 8 | 4.96 | 5.22 | --- | 4.21 | 4.60 | 4.27 | 4.66 | 4.88 | 5.08 | 5.15 | 5.02 | 4.94 |
| 9 | 5.00 | 5.20 | 4.68 | 4.20 | 4.58 | 4.28 | 4.62 | 4.85 | 5.06 | 5.18 | 5.01 | 4.94 |
| 10 | 5.22 | --- | 4.60 | 4.20 | 4.58 | 4.60 | 4.58 | 4.85 | 5.00 | 5.10 | 5.00 | 5.02 |
| 11 | 5.20 | 5.24 | 4.56 | 4.20 | 4.58 | 5.22 | 4.56 | 4.85 | 4.97 | 5.16 | 5.00 | 5.10 |
| 12 | 5.20 | 5.16 | 4.52 | 4.20 | 4.56 | 5.24 | 4.58 | 4.88 | 4.97 | 5.12 | 5.00 | 5.09 |
| 13 | 5.20 | 5.16 | 4.40 | 4.20 | 4.55 | 5.36 | 4.62 | 4.89 | 4.95 | 5.10 | 4.98 | 5.13 |
| 14 | 5.28 | 5.10 | 4.42 | 4.20 | 4.54 | 5.34 | 4.68 | 4.90 | 4.97 | 5.05 | 5.02 | 5.00 |
| 15 | 5.18 | 5.10 | 4.42 | 4.20 | 4.50 | 5.34 | 4.66 | 4.92 | 5.07 | 4.98 | 5.04 | 5.02 |
| 16 | 5.09 | 5.02 | 4.39 | 4.20 | 4.46 | 5.30 | 4.68 | 5.01 | 5.10 | 5.14 | 5.04 | 4.98 |
| 17 | 5.00 | 5.04 | 4.37 | 4.20 | 4.42 | 5.26 | 4.68 | 5.02 | 5.10 | 5.12 | 5.04 | 4.80 |
| 18 | 5.00 | 5.08 | 4.36 | --- | 4.38 | 5.24 | 4.70 | 5.12 | 5.10 | 5.08 | 5.05 | 4.79 |
| 19 | 5.09 | 4.99 | 4.36 | 4.20 | 4.36 | --- | 4.68 | 5.12 | 5.10 | 5.06 | 5.02 | 4.79 |
| 20 | 5.08 | 5.20 | 4.36 | 4.20 | 4.36 | 5.22 | 4.65 | 5.10 | 5.10 | 5.06 | 5.02 | 4.82 |
| 21 | 5.05 | 5.24 | 4.35 | 4.22 | 4.40 | 5.14 | 4.67 | 5.06 | 5.09 | 5.06 | 5.00 | 4.90 |
| 22 | 5.02 | 5.00 | 4.34 | 4.26 | 4.40 | 5.09 | 4.65 | 5.04 | 5.12 | 5.04 | 4.99 | 4.89 |
| 23 | 4.98 | 5.02 | 4.34 | 4.29 | 4.38 | 5.04 | 4.64 | 5.05 | 5.11 | 5.04 | 5.00 | 5.00 |
| 24 | 5.11 | 5.00 | --- | 4.30 | 4.37 | 4.86 | 4.65 | 5.05 | 5.12 | 5.04 | 4.95 | 4.98 |
| 25 | 5.10 | 4.96 | --- | 4.30 | 4.36 | 4.94 | 4.66 | 5.06 | 5.10 | 5.06 | 4.96 | 5.32 |
| 26 | 5.08 | 4.86 | --- | 4.30 | 4.37 | 4.94 | 4.68 | 5.06 | 5.09 | 5.06 | 5.05 | 5.49 |
| 27 | 5.08 | 4.79 | --- | 4.31 | 4.35 | 4.90 | 4.68 | 5.12 | 5.30 | 5.06 | 5.06 | 5.68 |
| 28 | 5.05 | 4.75 | --- | 4.31 | 4.34 | 4.90 | 4.69 | 5.11 | 5.35 | 5.06 | 5.02 | 5.65 |
| 29 | 5.00 | 4.66 | --- | 4.30 | --- | 4.90 | 4.69 | 5.06 | 5.34 | 5.06 | 5.04 | 5.77 |
| 30 | 4.98 | 4.64 | --- | 4.31 | --- | 4.86 | 4.78 | 5.06 | 5.30 | 5.06 | 5.02 | 5.85 |
| 31 | 4.96 | --- | 4.22 | 4.30 | --- | 4.82 | --- | 5.08 | --- | 5.06 | 5.00 | --- |
| MEAN | 5.04 | --- | --- | --- | --- | --- | 4.68 | 4.96 | 5.10 | 5.08 | 5.01 | 5.09 |
| MAX | 5.28 | --- | --- | --- | --- | --- | 4.86 | 5.12 | 5.35 | 5.18 | 5.06 | 5.85 |
| MIN | 4.88 | --- | --- | --- | --- | --- | 4.56 | 4.78 | 4.95 | 4.98 | 4.95 | 4.79 |

## 05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI

LOCATION.--Lat 42°36'53", long 88°37'29", in SW 1/4 SE 1/4 sec.20, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on right bank 25 ft upstream from bridge on Borg Road, 1.4 mi southeast of Delavan, and 0.2 mi downstream from Delavan Lake dam outlet.

DRAINAGE AREA.--42.1 mi$^2$, of which 2.3 mi$^2$ is non-contributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 920 ft, from topographic map

REMARKS.--Estimated daily discharges: Sept. 25-27. Records for Feb. 1 to Apr. 2 were based on twice-daily observer readings. Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 226 ft$^3$/s Sept. 30, 1986, gage height, 7.90 ft; minimum daily discharge, 0.18 ft$^3$/s May 22, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 226 ft$^3$/s Sept. 30, gage height, 7.90 ft; minimum daily discharge, 0.32 ft$^3$/s May 1, 2.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

| | | | |
|---|---|---|---|
| 5.10 | 0.15 | 6.00 | 40 |
| 5.15 | 0.57 | 6.50 | 78 |
| 5.20 | 1.1 | 7.00 | 124 |
| 5.30 | 2.5 | 7.50 | 178 |
| 5.40 | 4.6 | 8.00 | 239 |
| 5.50 | 7.9 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .59 | 62 | 81 | 19 | 22 | 29 | 49 | .32 | 4.7 | 128 | 2.4 | 2.4 |
| 2 | .56 | 81 | 92 | 19 | 23 | 29 | 50 | .32 | 4.1 | 84 | 2.2 | 2.5 |
| 3 | .57 | 88 | 89 | 19 | 25 | 28 | 48 | .36 | 3.4 | 55 | 2.1 | 2.4 |
| 4 | 1.0 | 90 | 88 | 19 | 56 | 27 | 46 | .46 | 3.9 | 53 | 2.2 | 2.3 |
| 5 | 1.2 | 89 | 85 | 20 | 62 | 27 | 44 | .60 | 4.9 | 53 | 2.2 | 2.3 |
| 6 | 1.4 | 98 | 82 | 19 | 45 | 28 | 43 | .76 | 29 | 55 | 3.0 | 2.2 |
| 7 | 1.5 | 102 | 79 | 18 | 43 | 15 | 42 | .73 | 48 | 56 | 3.0 | 1.9 |
| 8 | 1.5 | 99 | 76 | 18 | 44 | 7.0 | 41 | .68 | 49 | 66 | 2.9 | 1.7 |
| 9 | 19 | 98 | 79 | 19 | 43 | 15 | 39 | .71 | 48 | 72 | 2.9 | 1.9 |
| 10 | 53 | 99 | 86 | 17 | 43 | 41 | 16 | .80 | 47 | 70 | 2.6 | 3.2 |
| 11 | 70 | 97 | 82 | 17 | 41 | 86 | 3.8 | .84 | 28 | 70 | 2.4 | 45 |
| 12 | 70 | 93 | 76 | 17 | 41 | 110 | 4.0 | .83 | 2.3 | 69 | 2.5 | 64 |
| 13 | 69 | 97 | 51 | 17 | 39 | 120 | 4.1 | .87 | 2.5 | 66 | 2.3 | 62 |
| 14 | 66 | 104 | 37 | 17 | 37 | 110 | 4.1 | 1.2 | 2.9 | 65 | 2.5 | 59 |
| 15 | 63 | 103 | 37 | 17 | 34 | 110 | 4.1 | 2.1 | 3.8 | 42 | 2.5 | 57 |
| 16 | 61 | 99 | 36 | 17 | 30 | 110 | 4.5 | 28 | 4.1 | 72 | 2.9 | 56 |
| 17 | 59 | 100 | 35 | 17 | 32 | 110 | 4.6 | 42 | 4.5 | 67 | 3.4 | 54 |
| 18 | 59 | 104 | 34 | 17 | 32 | 110 | 22 | 45 | 3.7 | 36 | 3.3 | 23 |
| 19 | 61 | 107 | 33 | 17 | 32 | 110 | 30 | 44 | 3.9 | 2.3 | 2.9 | .56 |
| 20 | 61 | 105 | 33 | 17 | 33 | 110 | 31 | 43 | 4.7 | 2.3 | 2.5 | .40 |
| 21 | 60 | 105 | 32 | 18 | 34 | 100 | 14 | 42 | 3.9 | 2.2 | 2.7 | .72 |
| 22 | 59 | 101 | 32 | 18 | 33 | 150 | 4.0 | 22 | 4.2 | 2.1 | 2.5 | 1.1 |
| 23 | 58 | 97 | 32 | 19 | 33 | 150 | 2.5 | 3.4 | 4.5 | 2.0 | 2.5 | 38 |
| 24 | 62 | 92 | 31 | 21 | 32 | 94 | .46 | 3.4 | 4.3 | 2.1 | 2.3 | 58 |
| 25 | 62 | 89 | 30 | 23 | 32 | 68 | .41 | 4.1 | 4.0 | 2.2 | 2.0 | 78 |
| 26 | 61 | 85 | 30 | 23 | 32 | 52 | .38 | 3.7 | 4.1 | 2.3 | 2.8 | 160 |
| 27 | 59 | 82 | 26 | 22 | 32 | 54 | .45 | 24 | 94 | 2.3 | 3.2 | 160 |
| 28 | 59 | 78 | 21 | 22 | 32 | 54 | .41 | 39 | 142 | 2.6 | 2.8 | 159 |
| 29 | 57 | 75 | 20 | 22 | --- | 52 | .36 | 40 | 135 | 2.5 | 2.4 | 177 |
| 30 | 56 | 73 | 20 | 22 | --- | 52 | .45 | 21 | 130 | 2.5 | 2.4 | 212 |
| 31 | 55 | --- | 20 | 22 | --- | 50 | --- | 4.1 | --- | 2.7 | 2.4 | --- |
| TOTAL | 1367.32 | 2792 | 1585 | 589 | 1017 | 2208.0 | 553.62 | 420.28 | 828.4 | 1209.1 | 80.7 | 1487.58 |
| MEAN | 44.1 | 93.1 | 51.1 | 19.0 | 36.3 | 71.2 | 18.5 | 13.6 | 27.6 | 39.0 | 2.60 | 49.6 |
| MAX | 70 | 107 | 92 | 23 | 62 | 150 | 50 | 45 | 142 | 128 | 3.4 | 212 |
| MIN | .56 | 62 | 20 | 17 | 22 | 7.0 | .36 | .32 | 2.3 | 2.0 | 2.0 | .40 |
| CFSM | 1.05 | 2.21 | 1.21 | .45 | .86 | 1.69 | .44 | .32 | .66 | .93 | .06 | 1.18 |
| IN. | 1.21 | 2.47 | 1.40 | .52 | .90 | 1.95 | .49 | .37 | .73 | 1.07 | .07 | 1.31 |

CAL YR 1985 TOTAL 11382.05 MEAN 31.2 MAX 107 MIN .18 CFSM .74 IN 10.06
WTR YR 1986 TOTAL 14138.00 MEAN 38.7 MAX 212 MIN .32 CFSM .92 IN 12.49

## 05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--
TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler from October to December 1983. Observer sampler from January 1984 to present.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 4.60 mg/L Apr. 22, 1984; minimum observed, 0.05 mg/L Apr. 30 and May 1, 1986.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 432 lb May 28, 1984; minimum daily, 0.06 lb May 22, 28. 1985.

EXTREMES FOR CURRENT YEAR.--
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.30 mg/L Oct. 4; minimum observed, 0.05 mg/L Apr. 30 and May. 1.
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 281 lb Sept. 29; minimum daily, 0.09 lb May 1, 2.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 04... | 1050 | -- | 1.2 | 1.30 |
| 04... | 1750 | -- | 1.4 | .190 |
| 05... | 1130 | -- | 1.2 | .110 |
| 05... | 1550 | -- | 1.2 | .080 |
| 06... | 1015 | -- | 1.4 | .090 |
| 10... | 0955 | -- | 33 | .100 |
| 10... | 1450 | -- | 74 | .100 |
| 11... | 0830 | -- | 70 | .120 |
| 11... | 1430 | -- | 70 | .130 |
| 12... | 0730 | -- | 70 | .150 |
| 17... | 1530 | -- | 59 | .130 |
| 23... | 0815 | -- | 57 | .130 |
| 24... | 1350 | -- | 62 | .120 |
| NOV | | | | |
| 01... | 1015 | -- | 59 | .170 |
| 01... | 1450 | -- | 64 | .240 |
| 02... | 1145 | -- | 80 | .130 |
| 03... | 1040 | -- | 88 | .110 |
| 04... | 0950 | -- | 90 | .130 |
| 18... | 0910 | -- | 106 | .130 |
| 18... | 1115 | -- | 105 | .120 |
| 19... | 1310 | -- | 108 | .130 |
| 21... | 1300 | -- | 105 | .120 |
| DEC | | | | |
| 01... | 1100 | -- | 85 | .190 |
| JAN , 1986 | | | | |
| 01... | 1533 | -- | 19 | .090 |
| FEB | | | | |
| 06... | 1030 | 43 | -- | .090 |
| 12... | 1150 | 46 | -- | .120 |
| MAR | | | | |
| 10... | 0835 | 41 | -- | .910 |
| 11... | 1035 | 92 | -- | .320 |
| 11... | 1445 | 114 | -- | .390 |
| 12... | 0810 | 112 | -- | .360 |
| 12... | 1530 | 114 | -- | .330 |
| 13... | 0740 | 117 | -- | .280 |
| 18... | 1350 | 112 | -- | .170 |
| APR | | | | |
| 29... | 0745 | -- | .30 | .080 |
| 30... | 0810 | -- | .38 | .050 |
| MAY | | | | |
| 01... | 0925 | -- | .30 | .050 |
| 16... | 0745 | -- | 2.3 | .190 |
| 17... | 0935 | -- | 41 | .180 |
| 19... | 1435 | -- | 45 | .100 |
| 20... | 0735 | -- | 43 | .100 |
| 20... | 1425 | -- | 43 | .090 |
| 21... | 0720 | -- | 41 | .110 |
| JUN , 1986 | | | | |
| 04 .. | 1405 | -- | 3.9 | .200 |
| 14... | 2000 | -- | 3.7 | .140 |
| 15... | 0930 | -- | 3.7 | .130 |
| 18... | 1405 | -- | 3.7 | .180 |
| 27... | 1310 | -- | 141 | .290 |
| 27... | 1510 | -- | 143 | .290 |
| 28... | 1055 | -- | 142 | .150 |
| 29... | 1045 | -- | 136 | .120 |
| 30... | 0920 | -- | 131 | .120 |
| JUL | | | | |
| 07... | 1050 | -- | 56 | .130 |
| 09... | 1315 | -- | 73 | .190 |
| 11... | 1445 | -- | 70 | .120 |
| 12... | 0945 | -- | 70 | .240 |
| 12... | 1205 | -- | 70 | .250 |
| 12... | 1455 | -- | 69 | .650 |
| 17... | 0800 | -- | 68 | .160 |
| 22... | 1020 | -- | 2.0 | .220 |
| AUG | | | | |
| 07... | 0910 | -- | 2.9 | .380 |
| 07... | 1240 | -- | 2.9 | .360 |
| 08... | 0745 | -- | 2.9 | .280 |
| 27... | 0805 | -- | 3.3 | .340 |
| 28... | 1355 | -- | 2.7 | .250 |
| SEP | | | | |
| 10... | 0825 | -- | 2.5 | .180 |
| 10... | 1450 | -- | 3.7 | .350 |
| 11... | 0850 | -- | 68 | .320 |
| 11... | 1530 | -- | 67 | .250 |
| 22... | 0810 | -- | .77 | .080 |
| 23... | 0820 | -- | 56 | .110 |
| 23... | 1515 | -- | 56 | .100 |
| 24... | 0820 | -- | 56 | .100 |
| 24... | 1530 | -- | 56 | .150 |
| 25... | 0855 | -- | 76 | .150 |
| 25... | 1335 | -- | 94 | .130 |
| 26... | 0845 | -- | 114 | .140 |
| 26... | 1125 | -- | 169 | .380 |
| 26... | 1420 | -- | 159 | .140 |
| 27... | 1000 | -- | 160 | .160 |
| 27... | 1045 | -- | 160 | .330 |
| 27... | 1520 | -- | 160 | .170 |
| 28... | 0915 | -- | 157 | .130 |
| 29... | 1205 | -- | 167 | .760 |
| 29... | 1540 | -- | 172 | .290 |
| 30... | 0815 | -- | 201 | .220 |
| 30... | 1445 | -- | 224 | .180 |

## 05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

### PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .29 | 62.0 | 66.00 | 9.49 | 11.0 | 14.00 | 34.00 | .09 | 4.51 | 84.00 | 2.18 | 2.39 |
| 2 | .29 | 60.0 | 63.00 | 9.46 | 11.0 | 14.00 | 35.00 | .09 | 4.08 | 56.00 | 1.95 | 2.33 |
| 3 | .30 | 55.0 | 56.00 | 9.43 | 12.0 | 14.00 | 32.00 | .11 | 3.56 | 37.00 | 1.85 | 2.07 |
| 4 | 1.93 | 62.0 | 54.00 | 9.52 | 27.0 | 13.00 | 31.00 | .15 | 4.13 | 36.00 | 1.84 | 1.84 |
| 5 | .71 | 61.0 | 51.00 | 9.69 | 30.0 | 13.00 | 29.00 | .20 | 5.11 | 36.00 | 1.81 | 1.71 |
| 6 | .65 | 65.0 | 48.00 | 9.33 | 22.0 | 12.00 | 28.00 | .27 | 30.00 | 38.00 | 3.45 | 1.50 |
| 7 | .74 | 65.0 | 45.00 | 8.87 | 21.0 | 6.50 | 27.00 | .27 | 47.00 | 39.00 | 5.41 | 1.23 |
| 8 | .77 | 62.0 | 42.00 | 8.78 | 24.0 | 3.00 | 26.00 | .27 | 46.00 | 47.00 | 4.39 | 1.02 |
| 9 | 9.89 | 59.0 | 43.00 | 9.04 | 23.0 | 31.00 | 24.00 | .29 | 44.00 | 68.00 | 4.05 | 1.37 |
| 10 | 29.00 | 58.0 | 46.00 | 8.32 | 26.0 | 162 | 9.87 | .35 | 42.00 | 59.00 | 3.38 | 4.76 |
| 11 | 47.00 | 55.0 | 44.00 | 8.26 | 24.0 | 182 | 2.26 | .39 | 24.00 | 51.00 | 2.93 | 65.00 |
| 12 | 55.00 | 52.0 | 40.00 | 8.26 | 27.0 | 202 | 2.35 | .40 | 1.89 | 145 | 2.84 | 79.00 |
| 13 | 54.00 | 62.0 | 27.00 | 8.26 | 25.0 | 181 | 2.36 | .45 | 1.97 | 178 | 2.45 | 68.00 |
| 14 | 51.00 | 77.0 | 20.00 | 8.26 | 24.0 | 148 | 2.29 | .85 | 2.18 | 131 | 2.44 | 59.00 |
| 15 | 47.00 | 76.0 | 19.00 | 8.04 | 20.0 | 137 | 2.29 | 1.95 | 2.75 | 63.00 | 2.34 | 51.00 |
| 16 | 44.00 | 72.0 | 19.00 | 8.26 | 18.0 | 125 | 2.44 | 28.00 | 3.27 | 80.00 | 2.50 | 45.00 |
| 17 | 42.00 | 71.0 | 18.00 | 8.26 | 19.0 | 113 | 2.49 | 39.00 | 3.91 | 60.00 | 3.57 | 39.00 |
| 18 | 41.00 | 70.0 | 18.00 | 8.26 | 19.0 | 101 | 11.00 | 33.00 | 3.54 | 33.00 | 3.64 | 16.00 |
| 19 | 43.00 | 74.0 | 17.00 | 8.25 | 19.0 | 101 | 16.00 | 25.00 | 3.71 | 2.32 | 3.35 | .33 |
| 20 | 43.00 | 71.0 | 17.00 | 8.26 | 18.0 | 95.00 | 16.00 | 22.00 | 4.37 | 2.44 | 3.06 | .21 |
| 21 | 42.00 | 68.0 | 17.00 | 8.78 | 18.0 | 86.00 | 6.80 | 25.00 | 3.60 | 2.50 | 3.58 | .34 |
| 22 | 41.00 | 64.0 | 17.00 | 8.82 | 18.0 | 130 | 1.94 | 13.00 | 3.78 | 2.45 | 3.49 | .52 |
| 23 | 40.00 | 61.0 | 16.00 | 9.00 | 18.0 | 130 | 1.21 | 2.22 | 3.96 | 2.27 | 3.65 | 21.00 |
| 24 | 40.00 | 56.0 | 16.00 | 10.00 | 17.0 | 76.00 | .22 | 2.32 | 3.72 | 2.33 | 3.59 | 39.00 |
| 25 | 39.00 | 53.0 | 15.00 | 11.00 | 17.0 | 55.00 | .19 | 2.93 | 3.35 | 2.44 | 3.37 | 63.00 |
| 26 | 38.00 | 50.0 | 15.00 | 11.00 | 17.0 | 42.00 | .17 | 2.75 | 3.34 | 2.48 | 4.93 | 156 |
| 27 | 36.00 | 47.0 | 13.00 | 11.00 | 16.0 | 44.00 | .20 | 19.00 | 126 | 2.39 | 5.59 | 152 |
| 28 | 34.00 | 44.0 | 11.00 | 11.00 | 16.0 | 41.00 | .18 | 32.00 | 122 | 2.68 | 3.86 | 113 |
| 29 | 33.00 | 42.0 | 10.00 | 11.00 | --- | 39.00 | .14 | 34.00 | 90.00 | 2.50 | 3.08 | 281 |
| 30 | 31.00 | 40.0 | 10.00 | 11.00 | --- | 39.00 | .13 | 18.00 | 84.00 | 2.36 | 2.80 | 225 |
| 31 | 31.00 | --- | 9.91 | 11.00 | --- | 35.00 | --- | 3.72 | --- | 2.49 | 2.59 | --- |
| TOTAL | 916.57 | 1814.0 | 902.91 | 287.90 | 557.0 | 2384.50 | 346.53 | 308.07 | 725.73 | 1272.65 | 99.96 | 1493.62 |

WTR YR 1986 TOTAL 11109.44

## 05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI

LOCATION.--Lat 42°35'50", long 88°49'45", in SW 1/4 sec.27, T.2 N., R.14 E., Rock County, Hydrologic Unit 07090001, on left bank 25 ft downstream from bridge on Carvers Rock Road, 3.3 mi northeast of Clinton, 13 mi northeast of Beloit, and 17.8 mi upstream from mouth.

DRAINAGE AREA.--199 mi$^2$, of which 2.33 mi$^2$ is noncontributing.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 955: 1940. WSP 1308: 1950(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 823 ft, from topographic map. September 1939 to December 1979, water-stage recorder at site 1.8 mi downstream at a different datum.

REMARKS.--Estimated daily discharge: Mar. 10-12, 14-17, 19, and ice periods listed in rating table below. Records good except those for estimated daily discharges, which are fair. Some seasonal regulation caused by dams used to maintain levels of Turtle and Delavan Lakes.

AVERAGE DISCHARGE.--47 years, 124 ft$^3$/s, 8.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft$^3$/s Apr. 21, 1973, gage height, 12.85 ft, from rating curve extended above 6,500 ft$^3$/s on basis of slope-area measurement of peak flow; minimum discharge, 8.0 ft$^3$/s Dec. 29, 1956, gage height, 2.04 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 10 | Unknown | *3,120 | *9.10 | Sept. 27 | 0030 | 1,410 | 7.38 |
| Sept. 25 | 1415 | 1,380 | 7.34 | | | | |

Minimum discharge, 30 ft$^3$/s Jan. 27, gage height, 3.22 ft, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Dec. 3 to Jan. 20, Jan. 24 to Feb. 3, Feb. 8-18, Feb. 26 to Mar. 3, Mar. 8 and 9.)

| | | | |
|---|---|---|---|
| 3.5 | 60 | 6.0 | 726 |
| 4.0 | 140 | 7.0 | 1,180 |
| 4.5 | 246 | 8.0 | 1,880 |
| 5.0 | 374 | 9.0 | 2,980 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 79 | 500 | 568 | 150 | 140 | 160 | 235 | 138 | 110 | 228 | 85 | 74 |
| 2 | 76 | 1020 | 621 | 150 | 140 | 160 | 228 | 126 | 104 | 208 | 81 | 72 |
| 3 | 75 | 605 | 440 | 150 | 140 | 160 | 222 | 120 | 102 | 192 | 81 | 72 |
| 4 | 87 | 424 | 340 | 150 | 354 | 169 | 224 | 117 | 101 | 161 | 78 | 72 |
| 5 | 122 | 366 | 300 | 150 | 557 | 191 | 223 | 112 | 101 | 146 | 77 | 69 |
| 6 | 107 | 329 | 280 | 150 | 401 | 199 | 214 | 115 | 109 | 144 | 90 | 69 |
| 7 | 97 | 312 | 260 | 140 | 282 | 175 | 208 | 110 | 134 | 283 | 98 | 69 |
| 8 | 90 | 292 | 240 | 150 | 230 | 160 | 198 | 107 | 142 | 245 | 91 | 69 |
| 9 | 161 | 304 | 230 | 150 | 190 | 160 | 188 | 104 | 137 | 258 | 85 | 71 |
| 10 | 400 | 440 | 230 | 150 | 180 | 2100 | 184 | 102 | 134 | 206 | 84 | 122 |
| 11 | 330 | 370 | 220 | 160 | 180 | 1300 | 160 | 99 | 149 | 214 | 84 | 147 |
| 12 | 313 | 345 | 210 | 160 | 170 | 820 | 136 | 104 | 143 | 225 | 79 | 147 |
| 13 | 319 | 390 | 200 | 150 | 170 | 863 | 136 | 105 | 115 | 198 | 77 | 135 |
| 14 | 260 | 358 | 180 | 150 | 170 | 780 | 143 | 113 | 122 | 170 | 89 | 127 |
| 15 | 214 | 331 | 170 | 150 | 170 | 540 | 152 | 115 | 158 | 178 | 96 | 127 |
| 16 | 194 | 372 | 170 | 160 | 160 | 480 | 152 | 148 | 167 | 266 | 88 | 127 |
| 17 | 183 | 360 | 170 | 170 | 160 | 490 | 151 | 215 | 127 | 207 | 83 | 127 |
| 18 | 179 | 526 | 170 | 180 | 160 | 569 | 148 | 435 | 113 | 174 | 79 | 129 |
| 19 | 291 | 620 | 170 | 180 | 177 | 620 | 155 | 291 | 109 | 148 | 79 | 114 |
| 20 | 283 | 488 | 170 | 180 | 215 | 460 | 160 | 219 | 103 | 109 | 74 | 95 |
| 21 | 250 | 385 | 170 | 185 | 209 | 394 | 160 | 207 | 100 | 100 | 74 | 105 |
| 22 | 227 | 347 | 170 | 214 | 207 | 342 | 139 | 188 | 104 | 96 | 73 | 113 |
| 23 | 207 | 319 | 170 | 200 | 188 | 329 | 125 | 163 | 104 | 93 | 73 | 284 |
| 24 | 322 | 294 | 160 | 180 | 181 | 318 | 123 | 131 | 93 | 88 | 72 | 255 |
| 25 | 279 | 275 | 150 | 170 | 172 | 316 | 122 | 128 | 93 | 93 | 72 | 1110 |
| 26 | 248 | 267 | 150 | 140 | 170 | 353 | 123 | 124 | 88 | 97 | 93 | 1020 |
| 27 | 220 | 264 | 150 | 120 | 160 | 324 | 118 | 130 | 155 | 93 | 115 | 1080 |
| 28 | 200 | 259 | 150 | 130 | 160 | 293 | 119 | 149 | 270 | 91 | 94 | 540 |
| 29 | 189 | 248 | 150 | 130 | --- | 275 | 119 | 156 | 262 | 93 | 86 | 783 |
| 30 | 181 | 239 | 150 | 140 | --- | 260 | 151 | 152 | 239 | 90 | 82 | 902 |
| 31 | 178 | --- | 150 | 140 | --- | 245 | --- | 129 | --- | 85 | 77 | --- |
| TOTAL | 6361 | 11649 | 7059 | 4879 | 5793 | 14005 | 4916 | 4670 | 3968 | 4959 | 2589 | 8226 |
| MEAN | 205 | 388 | 228 | 157 | 207 | 452 | 164 | 151 | 132 | 160 | 83.5 | 274 |
| MAX | 400 | 1020 | 621 | 214 | 557 | 2100 | 235 | 435 | 270 | 283 | 115 | 1110 |
| MIN | 75 | 239 | 150 | 120 | 140 | 160 | 118 | 99 | 88 | 85 | 72 | 69 |
| CFSM | 1.03 | 1.95 | 1.15 | .79 | 1.04 | 2.27 | .82 | .76 | .66 | .80 | .42 | 1.38 |
| IN. | 1.19 | 2.18 | 1.32 | .91 | 1.08 | 2.62 | .92 | .87 | .74 | .93 | .48 | 1.54 |

CAL YR 1985 TOTAL 66233 MEAN 181 MAX 1020 MIN 60 CFSM .91 IN 12.38
WTR YR 1986 TOTAL 79074 MEAN 217 MAX 2100 MIN 69 CFSM 1.09 IN 14.78

## 05432500 PECATONICA RIVER AT DARLINGTON, WI

LOCATION.--Lat 42°40'40", long 90°07'07", in NE 1/4 sec.3, T.2 N., R.3 E., Lafayette County, Hydrologic Unit 07090003, on right bank in Darlington, 0.3 mi downstream from Vinegar Branch and 3.6 mi upstream from Otter Creek.

DRAINAGE AREA.--273 $mi^2$.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: None, except for ice period listed in rating table below. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--47 years, 189 $ft^3/s$, 9.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 $ft^3/s$ July 16, 1950, gage height, 20.71 ft, from rating curve extended above 11,000 $ft^3/s$ basis of slope-area determination of peak flow; minimum, 17 $ft^3/s$ Nov. 29, 1966, gage height, 2.09 ft, result of freezeup; minimum gage height, 1.07 ft Dec. 6, 1968, result of freezeup.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Feb. 21, 1937, reached a stage of 17.6 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 $ft^3/s$ and maximum (*):

| DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE ($ft^3/s$) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 20 | 0300 | *2,420 | *13.16 | No other peak greater than base discharge. | | | |

Minimum discharge, 98 $ft^3/s$ Mar. 7, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 9 to Dec. 2; stage-discharge relation affected by ice Dec. 3 to Mar. 8.)

| | | | |
|---|---|---|---|
| 2.2 | 104 | 8.0 | 804 |
| 3.0 | 172 | 9.0 | 966 |
| 4.0 | 270 | 10.0 | 1,160 |
| 5.0 | 385 | 11.0 | 1,450 |
| 6.0 | 512 | 12.0 | 1,830 |
| 7.0 | 653 | 13.0 | 2,320 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 190 | 427 | 271 | 170 | 160 | 150 | 479 | 306 | 213 | 172 | 123 | 113 |
| 2 | 155 | 753 | 235 | 170 | 160 | 160 | 468 | 271 | 203 | 169 | 119 | 110 |
| 3 | 142 | 484 | 210 | 170 | 160 | 160 | 460 | 257 | 195 | 164 | 116 | 109 |
| 4 | 140 | 361 | 250 | 170 | 170 | 170 | 525 | 253 | 195 | 157 | 114 | 123 |
| 5 | 141 | 305 | 230 | 170 | 210 | 170 | 492 | 254 | 217 | 154 | 114 | 118 |
| 6 | 133 | 285 | 200 | 170 | 210 | 150 | 471 | 267 | 205 | 150 | 150 | 110 |
| 7 | 127 | 291 | 190 | 170 | 200 | 130 | 434 | 252 | 202 | 152 | 150 | 108 |
| 8 | 130 | 259 | 190 | 170 | 180 | 160 | 410 | 241 | 198 | 186 | 141 | 107 |
| 9 | 167 | 258 | 180 | 170 | 170 | 193 | 388 | 233 | 186 | 174 | 131 | 115 |
| 10 | 242 | 275 | 180 | 170 | 160 | 307 | 371 | 228 | 209 | 171 | 127 | 207 |
| 11 | 210 | 237 | 170 | 180 | 160 | 558 | 364 | 228 | 273 | 184 | 129 | 567 |
| 12 | 370 | 233 | 170 | 180 | 160 | 451 | 364 | 243 | 243 | 181 | 120 | 276 |
| 13 | 378 | 269 | 170 | 170 | 160 | 449 | 363 | 237 | 214 | 166 | 117 | 178 |
| 14 | 250 | 290 | 170 | 170 | 160 | 563 | 380 | 291 | 204 | 151 | 158 | 155 |
| 15 | 214 | 267 | 170 | 180 | 160 | 582 | 468 | 278 | 241 | 146 | 178 | 149 |
| 16 | 196 | 298 | 170 | 190 | 160 | 627 | 395 | 353 | 222 | 149 | 131 | 141 |
| 17 | 179 | 323 | 170 | 190 | 170 | 737 | 356 | 377 | 201 | 149 | 123 | 134 |
| 18 | 181 | 409 | 170 | 180 | 170 | 1140 | 337 | 453 | 186 | 138 | 119 | 135 |
| 19 | 219 | 618 | 170 | 180 | 180 | 1830 | 331 | 342 | 185 | 133 | 115 | 136 |
| 20 | 205 | 464 | 170 | 180 | 180 | 2180 | 324 | 292 | 179 | 130 | 112 | 140 |
| 21 | 182 | 354 | 170 | 170 | 170 | 1430 | 317 | 271 | 171 | 127 | 112 | 158 |
| 22 | 172 | 344 | 170 | 170 | 170 | 980 | 303 | 259 | 185 | 126 | 109 | 183 |
| 23 | 184 | 325 | 170 | 170 | 170 | 886 | 293 | 251 | 258 | 125 | 108 | 193 |
| 24 | 274 | 272 | 170 | 170 | 160 | 794 | 287 | 244 | 190 | 122 | 107 | 171 |
| 25 | 224 | 289 | 170 | 170 | 160 | 726 | 287 | 242 | 175 | 143 | 106 | 391 |
| 26 | 191 | 301 | 170 | 160 | 160 | 715 | 311 | 237 | 169 | 147 | 148 | 330 |
| 27 | 177 | 275 | 170 | 160 | 150 | 627 | 309 | 250 | 171 | 131 | 251 | 243 |
| 28 | 163 | 257 | 170 | 160 | 140 | 574 | 290 | 257 | 178 | 135 | 142 | 270 |
| 29 | 154 | 203 | 170 | 160 | --- | 552 | 295 | 235 | 168 | 134 | 122 | 363 |
| 30 | 150 | 228 | 170 | 160 | --- | 522 | 305 | 227 | 171 | 125 | 118 | 381 |
| 31 | 151 | --- | 170 | 160 | --- | 486 | --- | 222 | --- | 126 | 116 | --- |
| TOTAL | 5991 | 9954 | 5706 | 5310 | 4720 | 19209 | 11177 | 8351 | 6007 | 4617 | 4026 | 5914 |
| MEAN | 193 | 332 | 184 | 171 | 169 | 620 | 373 | 269 | 200 | 149 | 130 | 197 |
| MAX | 378 | 753 | 271 | 190 | 210 | 2180 | 525 | 453 | 273 | 186 | 251 | 567 |
| MIN | 127 | 203 | 170 | 160 | 140 | 130 | 287 | 222 | 168 | 122 | 106 | 107 |
| CFSM | .71 | 1.22 | .67 | .63 | .62 | 2.27 | 1.37 | .99 | .73 | .55 | .48 | .72 |
| IN. | .82 | 1.36 | .78 | .72 | .64 | 2.62 | 1.52 | 1.14 | .82 | .63 | .55 | .81 |

CAL YR 1985 TOTAL 88272 MEAN 242 MAX 3220 MIN 93 CFSM 89 IN 12.03
WTR YR 1986 TOTAL 90982 MEAN 249 MAX 2180 MIN 106 CFSM .91 IN 12.40

## 05433000 EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WI

LOCATION.--Lat 42°47'10" long 89°51'40", in SE 1/4 sec. 26, T.4 N., R.5 E., Lafayette County, Hydrologic Unit 07090003, on left bank at downstream side of bridge on State Highway 78, 1.8 mi south of Blanchardville and 4.5 mi upstream from Sawmill Creek.

DRAINAGE AREA.--221 mi$^2$.

PERIOD OF RECORD.--September 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 796.8 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft upstream at same datum. Auxiliary nonrecording gage 2.7 mi upstream at same datum read during high flows.

REMARKS.--Estimated daily discharges: None, except for ice period, Nov. 26 to Mar. 9. Records good except for ice-affected period, which is fair.

AVERAGE DISCHARGE.--47 years, 146 ft$^3$/s, 8.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft$^3$/s Feb. 28, 1948, gage height, 15.74 ft; minimum, 18 ft$^3$/s Nov. 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 19 | 2000 | *1,450 | *11.60 | No other peak greater than base discharge. | | | |

Minimum discharge, 128 ft$^3$/s, Oct. 7 and 8, gage height, 4.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 138 | 431 | 190 | 160 | 140 | 130 | 328 | 230 | 197 | 167 | 139 | 133 |
| 2 | 132 | 664 | 200 | 160 | 140 | 130 | 319 | 215 | 193 | 167 | 137 | 133 |
| 3 | 131 | 307 | 190 | 160 | 140 | 130 | 313 | 209 | 191 | 168 | 136 | 133 |
| 4 | 133 | 232 | 180 | 160 | 150 | 140 | 349 | 209 | 190 | 163 | 134 | 137 |
| 5 | 133 | 203 | 180 | 160 | 160 | 140 | 334 | 209 | 190 | 162 | 134 | 136 |
| 6 | 129 | 197 | 180 | 160 | 160 | 140 | 317 | 213 | 190 | 159 | 145 | 134 |
| 7 | 128 | 225 | 180 | 160 | 150 | 130 | 298 | 203 | 190 | 158 | 144 | 135 |
| 8 | 131 | 191 | 170 | 150 | 150 | 140 | 284 | 200 | 189 | 176 | 145 | 133 |
| 9 | 142 | 187 | 160 | 150 | 140 | 160 | 274 | 196 | 182 | 177 | 139 | 135 |
| 10 | 177 | 197 | 160 | 150 | 140 | 245 | 267 | 195 | 187 | 170 | 138 | 186 |
| 11 | 149 | 177 | 150 | 150 | 130 | 353 | 263 | 195 | 221 | 188 | 139 | 439 |
| 12 | 228 | 178 | 140 | 150 | 130 | 305 | 261 | 201 | 197 | 184 | 133 | 243 |
| 13 | 239 | 222 | 180 | 150 | 130 | 305 | 263 | 200 | 188 | 167 | 133 | 155 |
| 14 | 157 | 231 | 170 | 150 | 130 | 361 | 275 | 230 | 185 | 158 | 148 | 148 |
| 15 | 150 | 199 | 170 | 150 | 130 | 359 | 319 | 216 | 205 | 156 | 151 | 147 |
| 16 | 145 | 266 | 170 | 140 | 130 | 382 | 272 | 325 | 191 | 172 | 137 | 144 |
| 17 | 141 | 255 | 170 | 140 | 130 | 475 | 254 | 306 | 181 | 158 | 134 | 141 |
| 18 | 143 | 354 | 170 | 140 | 130 | 741 | 246 | 394 | 178 | 153 | 133 | 142 |
| 19 | 162 | 531 | 170 | 140 | 130 | 1320 | 244 | 266 | 177 | 152 | 132 | 142 |
| 20 | 152 | 309 | 170 | 140 | 140 | 1140 | 238 | 240 | 175 | 150 | 131 | 144 |
| 21 | 148 | 242 | 170 | 140 | 140 | 644 | 235 | 229 | 171 | 149 | 131 | 162 |
| 22 | 145 | 231 | 170 | 140 | 140 | 537 | 228 | 222 | 182 | 148 | 131 | 177 |
| 23 | 150 | 229 | 170 | 140 | 140 | 537 | 225 | 220 | 186 | 146 | 130 | 180 |
| 24 | 286 | 214 | 170 | 140 | 130 | 482 | 223 | 215 | 170 | 145 | 130 | 160 |
| 25 | 173 | 206 | 160 | 140 | 130 | 461 | 222 | 213 | 167 | 152 | 130 | 366 |
| 26 | 155 | 200 | 160 | 130 | 130 | 452 | 250 | 208 | 167 | 148 | 164 | 245 |
| 27 | 150 | 190 | 160 | 130 | 130 | 408 | 242 | 214 | 178 | 142 | 227 | 179 |
| 28 | 145 | 180 | 160 | 150 | 130 | 383 | 227 | 216 | 180 | 146 | 138 | 178 |
| 29 | 144 | 180 | 160 | 150 | --- | 369 | 228 | 206 | 168 | 142 | 133 | 253 |
| 30 | 142 | 180 | 160 | 150 | --- | 349 | 235 | 203 | 166 | 140 | 133 | 294 |
| 31 | 143 | --- | 160 | 140 | --- | 329 | --- | 199 | --- | 142 | 133 | --- |
| TOTAL | 4821 | 7608 | 5250 | 4570 | 3850 | 12177 | 8033 | 6997 | 5532 | 4905 | 4342 | 5434 |
| MEAN | 156 | 254 | 169 | 147 | 138 | 393 | 268 | 226 | 184 | 158 | 140 | 181 |
| MAX | 286 | 664 | 200 | 160 | 160 | 1320 | 349 | 394 | 221 | 188 | 227 | 439 |
| MIN | 128 | 177 | 140 | 130 | 130 | 130 | 222 | 195 | 166 | 140 | 130 | 133 |
| CFSM | .71 | 1.15 | .77 | .67 | .62 | 1.78 | 1.21 | 1.02 | .83 | .72 | .63 | .82 |
| IN. | .81 | 1.28 | .88 | .77 | .65 | 2.05 | 1.35 | 1.18 | .93 | .83 | .73 | .91 |

CAL YR 1985 TOTAL 72436 MEAN 198 MAX 1700 MIN 123 CFSM .90 IN 12.19
WTR YR 1986 TOTAL 73519 MEAN 201 MAX 1320 MIN 128 CFSM .91 IN 12.38

## 05434500 PECATONICA RIVER AT MARTINTOWN, WI

LOCATION.--Lat 42°30'34", long 89°47'58", in SE 1/4 sec.32, T.1 N., R.6 E., Green County, Hydrologic Unit 07090003, on right bank about 400 ft downstream from highway bridge in Martintown, 0.3 mi upstream from Wisconsin-Illinois State line and 8.8 mi downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi$^2$.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1308: 1949-50(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.83 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1940, nonrecording gage at same site and datum. Auxiliary recording gage 1.2 mi downstream, at same datum, which records stage above 7.4 ft.

REMARKS.--Estimated daily discharge: None, except for ice period listed in rating table below. Records good except those for ice-affected period, and Mar. 11 to May 12, which are fair.

AVERAGE DISCHARGE.--47 years, 730 ft$^3$/s, 9.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft$^3$/s July 1, 1969, gage height, 21.46 ft; no flow for part of Dec. 14, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Mar. 23 | 1000 | *4,770 | *15.22 | No other peak greater than base discharge. | | | |

Minimum daily discharge, 482 ft$^3$/s Sept. 8.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Oct. 1 to Nov. 2, and Mar. 11; stage-discharge relation affected by ice Dec. 2 to Mar. 10.)

| Oct. 1 to Mar. 11 | | Mar. 12 to Sept. 30 | | | |
|---|---|---|---|---|---|
| 4.0 | 396 | 4.0 | 396 | 10.0 | 1,860 |
| 5.0 | 643 | 5.0 | 626 | 12.0 | 2,460 |
| 7.0 | 1,160 | 6.0 | 856 | 14.0 | 3,650 |
| 9.0 | 1,710 | 8.0 | 1,340 | 16.0 | 5,550 |
| 11.0 | 2,280 | | | | |

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 585 | 1280 | 1240 | 820 | 660 | 680 | 1690 | 1050 | 895 | 711 | 547 | 515 |
| 2 | 609 | 2080 | 1300 | 800 | 660 | 720 | 1620 | 1040 | 862 | 710 | 535 | 504 |
| 3 | 576 | 2220 | 1100 | 800 | 660 | 740 | 1580 | 994 | 832 | 704 | 523 | 498 |
| 4 | 551 | 2200 | 1300 | 800 | 700 | 760 | 1590 | 954 | 821 | 689 | 513 | 499 |
| 5 | 544 | 1890 | 1500 | 800 | 880 | 760 | 1640 | 939 | 887 | 666 | 505 | 510 |
| 6 | 542 | 1530 | 1300 | 780 | 900 | 740 | 1630 | 935 | 903 | 648 | 544 | 511 |
| 7 | 526 | 1440 | 1200 | 780 | 880 | 720 | 1570 | 931 | 863 | 644 | 614 | 502 |
| 8 | 505 | 1390 | 1100 | 780 | 820 | 700 | 1480 | 913 | 838 | 661 | 645 | 482 |
| 9 | 585 | 1310 | 1100 | 780 | 760 | 760 | 1390 | 883 | 813 | 816 | 612 | 528 |
| 10 | 804 | 1380 | 1000 | 760 | 700 | 1400 | 1330 | 863 | 792 | 816 | 587 | 885 |
| 11 | 891 | 1350 | 980 | 760 | 660 | 2110 | 1280 | 852 | 824 | 758 | 552 | 1030 |
| 12 | 964 | 1250 | 940 | 760 | 640 | 2230 | 1250 | 850 | 907 | 764 | 550 | 1440 |
| 13 | 1140 | 1250 | 920 | 760 | 640 | 2210 | 1230 | 864 | 888 | 769 | 540 | 1340 |
| 14 | 1200 | 1300 | 920 | 760 | 640 | 2300 | 1260 | 968 | 854 | 724 | 575 | 914 |
| 15 | 976 | 1310 | 920 | 740 | 640 | 2330 | 1330 | 1020 | 902 | 670 | 649 | 734 |
| 16 | 816 | 1360 | 920 | 740 | 660 | 2330 | 1380 | 1140 | 934 | 644 | 685 | 681 |
| 17 | 744 | 1440 | 920 | 740 | 660 | 2380 | 1320 | 1310 | 902 | 647 | 606 | 652 |
| 18 | 711 | 1600 | 920 | 720 | 660 | 2620 | 1230 | 1630 | 834 | 642 | 555 | 648 |
| 19 | 727 | 1930 | 900 | 720 | 680 | 2850 | 1170 | 1630 | 791 | 605 | 542 | 636 |
| 20 | 773 | 2100 | 900 | 720 | 700 | 3150 | 1140 | 1460 | 768 | 587 | 517 | 633 |
| 21 | 774 | 2060 | 880 | 720 | 700 | 3790 | 1110 | 1250 | 747 | 584 | 507 | 669 |
| 22 | 728 | 1840 | 880 | 700 | 680 | 4490 | 1090 | 1130 | 739 | 569 | 510 | 757 |
| 23 | 703 | 1610 | 880 | 700 | 680 | 4740 | 1060 | 1060 | 754 | 561 | 492 | 887 |
| 24 | 1100 | 1490 | 860 | 700 | 680 | 4440 | 1060 | 1020 | 801 | 554 | 495 | 918 |
| 25 | 1290 | 1390 | 860 | 680 | 700 | 3860 | 1060 | 989 | 763 | 554 | 489 | 2080 |
| 26 | 1070 | 1330 | 860 | 680 | 720 | 3320 | 1040 | 975 | 714 | 588 | 523 | 2170 |
| 27 | 882 | 1310 | 860 | 680 | 720 | 2900 | 1050 | 979 | 704 | 599 | 616 | 1820 |
| 28 | 797 | 1270 | 840 | 680 | 680 | 2540 | 1060 | 1010 | 710 | 574 | 759 | 1340 |
| 29 | 740 | 1210 | 840 | 680 | --- | 2250 | 1050 | 1010 | 729 | 583 | 653 | 1600 |
| 30 | 701 | 1120 | 820 | 680 | --- | 2000 | 1050 | 967 | 716 | 574 | 555 | 2020 |
| 31 | 689 | --- | 820 | 680 | --- | 1820 | --- | 926 | --- | 553 | 530 | --- |
| TOTAL | 24243 | 46240 | 30780 | 22900 | 19760 | 68640 | 38740 | 32542 | 24487 | 20168 | 17525 | 28403 |
| MEAN | 782 | 1541 | 993 | 739 | 706 | 2214 | 1291 | 1050 | 816 | 651 | 565 | 947 |
| MAX | 1290 | 2220 | 1500 | 820 | 900 | 4740 | 1690 | 1630 | 934 | 816 | 759 | 2170 |
| MIN | 505 | 1120 | 820 | 680 | 640 | 680 | 1040 | 850 | 704 | 553 | 489 | 482 |
| CFSM | .76 | 1.49 | .96 | .72 | .68 | 2.14 | 1.25 | 1.02 | .79 | .63 | .55 | .92 |
| IN. | .87 | 1.66 | 1.11 | .82 | .71 | 2.47 | 1.39 | 1.17 | .88 | .73 | .63 | 1.02 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CAL YR 1985 | TOTAL | 369290 | MEAN | 1012 | MAX | 8500 | MIN 404 | CFSM .98 | IN 13.29 | | |
| WTR YR 1986 | TOTAL | 374428 | MEAN | 1026 | MAX | 4740 | MIN 482 | CFSM .99 | IN 13.47 | | |

## 05436500 SUGAR RIVER NEAR BRODHEAD, WI

LOCATION.--Lat 42°36'42", long 89°23'53", in SW 1/4 sec.26, T.2 N., R.9 E., Green County, Hydrologic Unit 07090004, on left bank at downstream side of highway bridge, 1.2 mi southwest of Brodhead, and 1.9 mi upstream from Sylvester Creek.

DRAINAGE AREA.--523 mi$^2$.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January and February 1914, published in WSP 1308.

REVISED RECORDS.--WSP 1236: 1914-16, 1918, 1922, 1927, 1933. WSP 1508: 1916-17(M), 1919(M), 1920, 1921(M), 1927-28(M), 1930(M), 1931, 1936(M), 1943(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 768.14 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1938, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: None, except for ice periods listed in rating table below. Records good except those for periods of ice effect, which are fair. Some regulation from dam and powerplant upstream.

AVERAGE DISCHARGE.--72 years, 351 ft$^3$/s, 9.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft$^3$/s Sept. 13, 1915, gage height, 11.4 ft from floodmarks, from rating curve extended above 7,500 ft$^3$/s; minimum, 35 ft$^3$/s Sept. 19, 1959, gage height, -0.16 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft$^3$/s and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) | DATE | TIME | DISCHARGE (ft$^3$/s) | GAGE HEIGHT (ft) |
|---|---|---|---|---|---|---|---|
| Nov. 3 | 2200 | 1,730 | 4.91 | Sept. 25 | 1600 | 1,330 | 3.98 |
| Mar. 20 | 1600 | *2,010 | *5.42 | Sept. 30 | 2400 | A 1,330 | 4.00 |

A Rising stage.

Minimum discharge, 258 ft$^3$/s Mar. 8, Aug. 25, 26, gage height, 0.68 ft; minimum gage height, 0.67 ft, Sept. 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Dec. 3 to Jan. 19, Jan. 22 to Feb. 2, and Feb. 7 to Mar. 10.)

| | | | |
|---|---|---|---|
| 0.60 | 236 | 4.0 | 1,310 |
| 1.0 | 319 | 6.0 | 2,320 |
| 2.0 | 592 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 306 | 672 | 583 | 430 | 360 | 340 | 626 | 465 | 411 | 347 | 283 | 287 |
| 2 | 305 | 1310 | 592 | 420 | 370 | 340 | 606 | 453 | 395 | 342 | 280 | 279 |
| 3 | 300 | 1590 | 480 | 420 | 388 | 350 | 609 | 431 | 386 | 335 | 272 | 275 |
| 4 | 303 | 1590 | 500 | 410 | 438 | 350 | 623 | 421 | 381 | 326 | 268 | 274 |
| 5 | 313 | 1160 | 520 | 410 | 600 | 350 | 656 | 420 | 376 | 317 | 266 | 292 |
| 6 | 314 | 808 | 500 | 400 | 667 | 350 | 678 | 418 | 382 | 314 | 281 | 278 |
| 7 | 306 | 658 | 500 | 390 | 660 | 340 | 659 | 411 | 379 | 314 | 307 | 271 |
| 8 | 306 | 652 | 490 | 400 | 600 | 340 | 605 | 400 | 375 | 311 | 320 | 266 |
| 9 | 352 | 659 | 490 | 400 | 500 | 370 | 559 | 395 | 361 | 329 | 314 | 290 |
| 10 | 467 | 740 | 480 | 420 | 430 | 700 | 531 | 386 | 360 | 361 | 305 | 515 |
| 11 | 540 | 725 | 470 | 450 | 400 | 1430 | 518 | 379 | 378 | 362 | 292 | 718 |
| 12 | 625 | 672 | 450 | 480 | 380 | 1670 | 505 | 392 | 384 | 384 | 285 | 794 |
| 13 | 691 | 638 | 380 | 490 | 370 | 1530 | 501 | 401 | 372 | 385 | 280 | 772 |
| 14 | 704 | 668 | 420 | 470 | 360 | 1380 | 523 | 451 | 372 | 360 | 287 | 650 |
| 15 | 611 | 712 | 450 | 470 | 350 | 1340 | 580 | 555 | 393 | 336 | 319 | 468 |
| 16 | 464 | 772 | 460 | 470 | 350 | 1300 | 633 | 610 | 407 | 359 | 319 | 388 |
| 17 | 406 | 767 | 470 | 500 | 350 | 1290 | 609 | 698 | 381 | 399 | 296 | 368 |
| 18 | 385 | 861 | 460 | 520 | 350 | 1470 | 551 | 968 | 361 | 360 | 282 | 392 |
| 19 | 396 | 1020 | 450 | 520 | 360 | 1820 | 519 | 971 | 347 | 325 | 278 | 397 |
| 20 | 422 | 1090 | 450 | 494 | 360 | 1970 | 497 | 942 | 340 | 316 | 274 | 378 |
| 21 | 455 | 1070 | 450 | 450 | 370 | 1810 | 483 | 754 | 332 | 296 | 268 | 413 |
| 22 | 418 | 872 | 450 | 440 | 360 | 1430 | 460 | 570 | 338 | 286 | 266 | 508 |
| 23 | 419 | 686 | 450 | 420 | 350 | 1150 | 437 | 495 | 349 | 286 | 263 | 544 |
| 24 | 591 | 604 | 450 | 410 | 350 | 966 | 444 | 477 | 348 | 282 | 260 | 519 |
| 25 | 721 | 568 | 440 | 400 | 350 | 898 | 446 | 460 | 335 | 287 | 259 | 1090 |
| 26 | 765 | 556 | 440 | 390 | 340 | 895 | 443 | 453 | 327 | 301 | 285 | 1040 |
| 27 | 635 | 548 | 440 | 380 | 340 | 842 | 462 | 458 | 328 | 299 | 371 | 949 |
| 28 | 442 | 519 | 440 | 380 | 340 | 788 | 485 | 472 | 379 | 296 | 436 | 827 |
| 29 | 413 | 485 | 430 | 370 | --- | 724 | 449 | 475 | 408 | 298 | 382 | 960 |
| 30 | 398 | 478 | 430 | 370 | --- | 686 | 453 | 450 | 362 | 294 | 322 | 1190 |
| 31 | 387 | --- | 430 | 360 | --- | 650 | --- | 430 | --- | 291 | 297 | --- |
| TOTAL | 14160 | 24150 | 14445 | 13334 | 11443 | 29869 | 16150 | 16061 | 11047 | 10098 | 9217 | 16392 |
| MEAN | 457 | 805 | 466 | 430 | 409 | 964 | 538 | 518 | 368 | 326 | 297 | 546 |
| MAX | 765 | 1590 | 592 | 520 | 667 | 1970 | 678 | 971 | 411 | 399 | 436 | 1190 |
| MIN | 300 | 478 | 380 | 360 | 340 | 340 | 437 | 379 | 327 | 282 | 259 | 266 |
| CFSM | .87 | 1.54 | .89 | .82 | .78 | 1.84 | 1.03 | .99 | .70 | .62 | .57 | 1.04 |
| IN. | 1.01 | 1.72 | 1.03 | .95 | .81 | 2.12 | 1.15 | 1.14 | .79 | .72 | .66 | 1.17 |

CAL YR 1985 TOTAL 183620 MEAN 503 MAX 4140 MIN 247 CFSM .96 IN 13.06
WTR YR 1986 TOTAL 186366 MEAN 511 MAX 1970 MIN 259 CFSM .98 IN 13.26

## 05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1973, 1976, 1979 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: Water years 1979-82, October 1983 to current year.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 623 mg/L July 11, 1983; minimum daily mean, 1 mg/L Dec. 20-23, 1979. Maximum observed, 786 mg/L July 10, 1984; minimum observed, 1 mg/L Dec. 20, 30, 1979, Jan. 9, 1986.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,160 tons July 13, 1984; minimum daily, 0.65 ton Dec. 20, 1979.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 119 mg/L June 22; minimum daily mean, 7 mg/L Nov. 25. Maximum observed, 123 mg/L Aug. 3; minimum observed, 1 mg/L Jan. 9.
SUSPENDED-SEDIMENT DISCHARGE Maximum daily, 320 tons Nov. 3; minimum daily, 7.3 tons Feb. 26-28.

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 31... | 1100 | 368 | 600 | 9.0 |
| DEC | | | | |
| 17... | 1415 | 464 | 630 | .0 |
| JAN , 1986 | | | | |
| 29... | 1200 | 394 | 700 | .0 |
| MAR | | | | |
| 12... | 1100 | 1720 | 322 | .5 |
| APR , 1986 | | | | |
| 24... | 0940 | 449 | 600 | 11.5 |
| JUN | | | | |
| 04... | 1340 | 382 | 590 | 19.5 |
| AUG | | | | |
| 11... | 0929 | 294 | 560 | 21.0 |
| SEP | | | | |
| 19... | 1417 | 398 | 560 | 16.5 |

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 04... | 0812 | -- | 301 | 58 |
| 07... | 0824 | -- | 308 | 32 |
| 10... | 1012 | -- | 460 | 56 |
| 12... | 110[illegible] | -- | 580 | 49 |
| 13... | 0814 | -- | 674 | 52 |
| 14... | 0831 | -- | 692 | 68 |
| 15... | 0926 | -- | 631 | 53 |
| 16... | 1042 | -- | 464 | 41 |
| 17... | 0817 | -- | 413 | 36 |
| 21... | 0834 | -- | 433 | 39 |
| 24... | 0852 | -- | 576 | 60 |
| 24... | 1745 | -- | 639 | 71 |
| 25... | 0850 | -- | 719 | 97 |
| 25... | 1820 | -- | 736 | 83 |
| 26... | 0820 | -- | 772 | 62 |
| 26... | 1918 | -- | 764 | 53 |
| 27... | 1727 | -- | 572 | 36 |
| 28... | 0809 | -- | 443 | 37 |
| 30... | 0810 | -- | 403 | 26 |
| 31... | 1100 | -- | 382 | 27 |
| 31... | 1101 | -- | 382 | 76 |
| NOV | | | | |
| 01... | 0837 | -- | 545 | 40 |
| 01... | 1712 | -- | 814 | 72 |
| 02... | 0800 | -- | 1290 | 88 |
| 02... | 1306 | -- | 1360 | 70 |
| 02... | 1814 | -- | 1410 | 64 |
| 03... | 0820 | -- | 1530 | 62 |
| 03... | 1233 | -- | 1610 | 64 |
| 03... | 1715 | -- | 1700 | 95 |
| 04... | 0823 | -- | 1670 | 79 |
| 04... | 1234 | -- | 1600 | 45 |
| 04... | 1711 | -- | 1520 | 55 |
| 05... | 0804 | -- | 1230 | 41 |
| 05... | 1227 | -- | 1150 | 22 |
| 05... | 1704 | -- | 1070 | 38 |
| 06... | 0814 | -- | 657 | 26 |
| 06... | 1700 | -- | 755 | 25 |
| 07... | 0822 | -- | 659 | 20 |
| 07... | 1711 | -- | 643 | 20 |
| 08... | 0813 | -- | 657 | 20 |
| 08... | 1715 | -- | 653 | 24 |
| NOV , 1985 | | | | |
| 09... | 0809 | -- | 652 | 19 |
| 09... | 1158 | -- | 649 | 17 |
| 10... | 0820 | -- | 747 | 19 |
| 10... | 0831 | -- | 747 | 21 |
| 10... | 1707 | -- | 742 | 21 |
| 11... | 1715 | -- | 715 | 16 |
| 12... | 0817 | -- | 680 | 10 |
| 12... | 1710 | -- | 665 | 8 |
| 13... | 0824 | -- | 639 | 14 |
| 13... | 1705 | -- | 631 | 11 |
| 14... | 0831 | -- | 660 | 15 |
| 14... | 1704 | -- | 681 | 17 |
| 15... | 0825 | -- | 710 | 17 |
| 15... | 1709 | -- | 719 | 17 |
| 16... | 0839 | -- | 759 | 10 |
| 16... | 1703 | -- | 802 | 32 |
| 17... | 0811 | -- | 765 | 23 |
| 17... | 1703 | -- | 765 | 23 |
| 18... | 0818 | -- | 814 | 29 |
| 18... | 1705 | -- | 905 | 32 |
| 19... | 0748 | -- | 990 | 41 |
| 19... | 1711 | -- | 1030 | 48 |
| 20... | 0836 | -- | 1070 | 36 |
| 20... | 1703 | -- | 1110 | 31 |
| 21... | 0807 | -- | 1100 | 22 |
| 21... | 1714 | -- | 1030 | 21 |
| 22... | 0810 | -- | 910 | 13 |
| 22... | 1702 | -- | 830 | 13 |
| 23... | 0818 | -- | 701 | 15 |
| 23... | 1703 | -- | 658 | 3 |
| 24... | 0826 | -- | 614 | 10 |
| 24... | 1710 | -- | 595 | 7 |
| 28... | 0915 | -- | 532 | 9 |
| 28... | 1720 | -- | 501 | 9 |
| DEC | | | | |
| 01... | 0849 | -- | 562 | 8 |
| 01... | 1701 | -- | 595 | 8 |
| 02... | 0822 | -- | 574 | 10 |
| 02... | 1703 | -- | 571 | 11 |
| 04... | 0807 | -- | 480 | 13 |
| 05... | 0848 | -- | 631 | 11 |
| 08... | 0810 | -- | 535 | 9 |

## 05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| DEC , 1985 | | | | |
| 12... | 0837 | 450 | -- | 22 |
| 15... | 0816 | 450 | -- | 26 |
| 17... | 1415 | 470 | -- | 13 |
| 17... | 1416 | 470 | -- | 21 |
| 19... | 0831 | 450 | -- | 11 |
| 22... | 0809 | 430 | -- | 28 |
| 26... | 0807 | 440 | -- | 56 |
| 29... | 0806 | 430 | -- | 15 |
| JAN , 1986 | | | | |
| 03... | 0814 | 420 | -- | 5 |
| 05... | 0831 | 410 | -- | 9 |
| 09... | 0822 | 400 | -- | 1 |
| 12... | 0844 | 480 | -- | 9 |
| 15... | 0818 | 470 | -- | 31 |
| 18... | 0920 | 520 | -- | 4 |
| 20... | 1705 | 482 | -- | 8 |
| 22... | 0812 | 440 | -- | 17 |
| 25... | 0824 | 400 | -- | 15 |
| 29... | 1220 | 370 | -- | 7 |
| 29... | 1221 | 370 | -- | 32 |
| 30... | 0838 | 370 | -- | 26 |
| FEB | | | | |
| 04... | 1648 | -- | 460 | 11 |
| 05... | 0821 | -- | 597 | 15 |
| 05... | 1707 | -- | 613 | 18 |
| 06... | 0803 | -- | 655 | 20 |
| 07... | 0836 | 660 | -- | 29 |
| 07... | 1713 | 660 | -- | 8 |
| 08... | 0816 | 600 | -- | 12 |
| 08... | 1722 | 600 | -- | 10 |
| 09... | 0844 | 500 | -- | 4 |
| 12... | 1640 | 380 | -- | 4 |
| 13... | 0903 | 370 | -- | 2 |
| 16... | 0942 | 350 | -- | 14 |
| 20... | 0904 | 360 | -- | 12 |
| 23... | 0841 | 350 | -- | 7 |
| 27... | 0903 | 340 | -- | 5 |
| MAR | | | | |
| 02... | 0930 | 340 | -- | 19 |
| 05... | 0903 | 350 | -- | 14 |
| 08... | 1330 | 340 | -- | 2 |
| 10... | 0842 | -- | 694 | 56 |
| 10... | 1206 | -- | 880 | 103 |
| 10... | 1732 | -- | 1340 | 104 |
| 11... | 0510 | -- | 1360 | 60 |
| 11... | 0802 | -- | 1310 | 45 |
| 11... | 1221 | -- | 1420 | 32 |
| 12... | 0832 | -- | 1720 | 44 |
| 12... | 1100 | -- | 1710 | 93 |
| 12... | 1101 | -- | 1710 | 87 |
| 12... | 1231 | -- | 1700 | 9 |
| 12... | 1712 | -- | 1670 | 24 |
| 13... | 0844 | -- | 1570 | 39 |
| 13... | 1214 | -- | 1520 | 43 |
| 13... | 1700 | -- | 1480 | 35 |
| 14... | 0903 | -- | 1400 | 36 |
| 14... | 1210 | -- | 1360 | 11 |
| 14... | 1706 | -- | 1310 | 9 |
| 15... | 0807 | -- | 1340 | 39 |
| 15... | 1231 | -- | 1350 | 10 |
| 15... | 1745 | -- | 1340 | 18 |
| 16... | 0810 | -- | 1320 | 28 |
| 16... | 1241 | -- | 1290 | 14 |
| 16... | 1738 | -- | 1270 | 17 |
| 17... | 0803 | -- | 1300 | 44 |
| 17... | 1236 | -- | 1270 | 14 |
| 17... | 1717 | -- | 1260 | 40 |
| 18... | 0836 | -- | 1360 | 39 |
| 18... | 1228 | -- | 1440 | 30 |
| 18... | 1628 | -- | 1530 | 40 |
| 19... | 0831 | -- | 1790 | 49 |
| 19... | 1207 | -- | 1810 | 22 |
| 19... | 1506 | -- | 1840 | 51 |
| 20... | 0906 | -- | 1980 | 10 |
| 20... | 1211 | -- | 1980 | 16 |
| MAR , 1986 | | | | |
| 20... | 1652 | -- | 2000 | 20 |
| 21... | 0817 | -- | 1860 | 14 |
| 21... | 1203 | -- | 1820 | 23 |
| 21... | 1720 | -- | 1750 | 16 |
| 22... | 0831 | -- | 1470 | 24 |
| 22... | 1208 | -- | 1410 | 10 |
| 22... | 1726 | -- | 1350 | 7 |
| 23... | 0830 | -- | 1190 | 24 |
| 23... | 1711 | -- | 1110 | 29 |
| 24... | 0852 | -- | 972 | 21 |
| 24... | 1706 | -- | 940 | 21 |
| 25... | 0803 | -- | 908 | 13 |
| 25... | 1712 | -- | 882 | 35 |
| 26... | 0810 | -- | 893 | 17 |
| 26... | 1739 | -- | 897 | 31 |
| 27... | 0821 | -- | 849 | 15 |
| 27... | 1656 | -- | 833 | 28 |
| 28... | 1211 | -- | 792 | 29 |
| 29... | 1214 | -- | 722 | 29 |
| 30... | 0832 | -- | 694 | 38 |
| 31... | 0904 | -- | 652 | 37 |
| APR | | | | |
| 01... | 0914 | -- | 636 | 45 |
| 02... | 0822 | -- | 607 | 44 |
| 03... | 1211 | -- | 610 | 30 |
| 07... | 0826 | -- | 665 | 34 |
| 10... | 0830 | -- | 534 | 66 |
| 13... | 0810 | -- | 502 | 57 |
| 16... | 0807 | -- | 628 | 31 |
| 20... | 0816 | -- | 498 | 65 |
| 24... | 0856 | -- | 449 | 62 |
| 24... | 1100 | -- | 449 | 48 |
| 24... | 1101 | -- | 449 | 51 |
| 29... | 0810 | -- | 460 | 71 |
| MAY | | | | |
| 01... | 0821 | -- | 466 | 66 |
| 04... | 0805 | -- | 422 | 60 |
| 08... | 0820 | -- | 403 | 74 |
| 11... | 0821 | -- | 376 | 86 |
| 14... | 0812 | -- | 446 | 81 |
| 15... | 0900 | -- | 526 | 67 |
| 16... | 0832 | -- | 610 | 69 |
| 16... | 1715 | -- | 613 | 40 |
| 17... | 0848 | -- | 649 | 65 |
| 17... | 1714 | -- | 735 | 38 |
| 18... | 0810 | -- | 998 | 58 |
| 18... | 1721 | -- | 964 | 38 |
| 19... | 0840 | -- | 969 | 45 |
| 19... | 1712 | -- | 975 | 39 |
| 20... | 0848 | -- | 962 | 61 |
| 21... | 0820 | -- | 792 | 37 |
| 22... | 0850 | -- | 580 | 85 |
| 23... | 0808 | -- | 511 | 60 |
| 24... | 0844 | -- | 482 | 74 |
| 25... | 0850 | -- | 460 | 84 |
| 27... | 0826 | -- | 454 | 56 |
| 29... | 0850 | -- | 479 | 86 |
| JUN | | | | |
| 01... | 0841 | -- | 412 | 103 |
| 04... | 1340 | -- | 382 | 104 |
| 04... | 1341 | -- | 382 | 67 |
| 05... | 0822 | -- | 376 | 87 |
| 08... | 0822 | -- | 376 | 98 |
| 10... | 0813 | -- | 361 | 99 |
| 12... | 0808 | -- | 384 | 87 |
| 15... | 0812 | -- | 389 | 57 |
| 17... | 0817 | -- | 384 | 74 |
| 19... | 0808 | -- | 349 | 87 |
| 22... | 0821 | -- | 335 | 121 |
| 26... | 0811 | -- | 328 | 102 |
| 29... | 1000 | -- | 416 | 73 |
| JUL | | | | |
| 03... | 0931 | -- | 335 | 18 |
| 06... | 1510 | -- | 310 | 55 |
| 10... | 0808 | -- | 356 | 57 |

## 05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

### WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND (00060) | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|
| JUL , 1986 | | | | |
| 13... | 0805 | -- | 387 | 93 |
| 17... | 0833 | -- | 403 | 76 |
| 20... | 0950 | -- | 326 | 76 |
| 24... | 0803 | -- | 284 | 86 |
| 27... | 0811 | -- | 301 | 82 |
| 31... | 0820 | -- | 289 | 82 |
| AUG | | | | |
| 03... | 0833 | -- | 270 | 123 |
| 07... | 0853 | -- | 304 | 74 |
| 10... | 0821 | -- | 306 | 65 |
| 11... | 0840 | -- | 293 | 54 |
| 11... | 0841 | -- | 293 | 56 |
| 14... | 0803 | -- | 287 | 56 |
| 17... | 0842 | -- | 297 | 68 |
| 21... | 0849 | -- | 268 | 60 |
| 24... | 0807 | -- | 260 | 50 |
| 28... | 0816 | -- | 438 | 60 |
| 31... | 0907 | -- | 299 | 43 |
| SEP | | | | |
| 04... | 0811 | -- | 274 | 64 |
| 07... | 0844 | -- | 272 | 71 |
| 10... | 0809 | -- | 472 | 84 |
| 10... | 1854 | -- | 559 | 65 |
| 11... | 0816 | -- | 700 | 68 |
| 11... | 1905 | -- | 765 | 71 |
| 12... | 0810 | -- | 784 | 62 |
| 12... | 1820 | -- | 806 | 67 |
| 13... | 0841 | -- | 782 | 38 |
| SEP , 1986 | | | | |
| 13... | 1750 | -- | 758 | 40 |
| 14... | 0850 | - | 688 | 69 |
| 14... | 1838 | -- | 590 | 78 |
| 15... | 0805 | -- | 474 | 52 |
| 15... | 1848 | -- | 436 | 55 |
| 18... | 0819 | -- | 387 | 47 |
| 19... | 1318 | -- | 395 | 54 |
| 19... | 1319 | -- | 395 | 53 |
| 21... | 0832 | -- | 396 | 31 |
| 22... | 0808 | -- | 488 | 64 |
| 22... | 1748 | -- | 524 | 54 |
| 23... | 0821 | -- | 550 | 55 |
| 23... | 1755 | -- | 529 | 51 |
| 24... | 0834 | -- | 499 | 47 |
| 24... | 1710 | -- | 512 | 53 |
| 25... | 0813 | -- | 1020 | 79 |
| 25... | 1210 | -- | 1220 | 103 |
| 25... | 2021 | -- | 1210 | 117 |
| 26... | 0808 | -- | 1020 | 46 |
| 26... | 1711 | -- | 1030 | 66 |
| 27... | 0838 | -- | 954 | 58 |
| 27... | 1747 | -- | 935 | 63 |
| 28... | 0916 | -- | 846 | 64 |
| 28... | 1749 | -- | 802 | 52 |
| 29... | 0804 | -- | 923 | 106 |
| 29... | 1720 | -- | 1030 | 57 |
| 30... | 0814 | -- | 1150 | 77 |
| 30... | 1220 | -- | 1180 | 33 |
| 30... | 1907 | -- | 1250 | 94 |

### SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN-TRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 102 | 84 | 57 | 110 | 8 | 13 | 8 | 9.3 | 18 | 17 | 12 | 11 |
| 2 | 84 | 69 | 74 | 261 | 10 | 16 | 8 | 9.1 | 18 | 18 | 12 | 11 |
| 3 | 69 | 56 | 74 | 320 | 12 | 17 | 8 | 9.1 | 18 | 19 | 12 | 11 |
| 4 | 56 | 46 | 64 | 278 | 13 | 17 | 8 | 8.8 | 18 | 21 | 12 | 11 |
| 5 | 46 | 39 | 36 | 115 | 11 | 19 | 8 | 8.8 | 18 | 29 | 12 | 11 |
| 6 | 38 | 32 | 26 | 58 | 10 | 19 | 8 | 8.6 | 18 | 32 | 12 | 11 |
| 7 | 34 | 28 | 20 | 36 | 10 | 15 | 8 | 8.4 | 18 | 32 | 12 | 11 |
| 8 | 40 | 33 | 22 | 38 | 9 | 13 | 8 | 8.6 | 12 | 19 | 12 | 11 |
| 9 | 47 | 45 | 19 | 33 | 12 | 16 | 8 | 8.6 | 8 | 11 | 13 | 15 |
| 10 | 55 | 69 | 20 | 40 | 15 | 20 | 8 | 9.1 | 8 | 9.3 | 73 | 215 |
| 11 | 52 | 76 | 17 | 33 | 18 | 24 | 8 | 9.7 | 8 | 8.6 | 45 | 174 |
| 12 | 50 | 84 | 10 | 18 | 22 | 29 | 8 | 10 | 8 | 8.2 | 35 | 158 |
| 13 | 55 | 103 | 12 | 21 | 23 | 25 | 8 | 11 | 8 | 8.0 | 36 | 151 |
| 14 | 73 | 138 | 16 | 28 | 25 | 33 | 8 | 10 | 8 | 7.8 | 22 | 84 |
| 15 | 54 | 90 | 16 | 32 | 24 | 37 | 8 | 10 | 8 | 7.6 | 21 | 77 |
| 16 | 41 | 52 | 19 | 41 | 18 | 28 | 8 | 10 | 8 | 7.6 | 21 | 74 |
| 17 | 36 | 40 | 24 | 50 | 16 | 27 | 8 | 11 | 8 | 7.6 | 33 | 113 |
| 18 | 37 | 38 | 30 | 71 | 15 | 27 | 8 | 11 | 8 | 7.6 | 38 | 153 |
| 19 | 38 | 40 | 43 | 117 | 12 | 20 | 8 | 11 | 8 | 7.8 | 39 | 189 |
| 20 | 38 | 44 | 34 | 100 | 16 | 25 | 8 | 11 | 8 | 7.8 | 16 | 87 |
| 21 | 40 | 49 | 22 | 63 | 22 | 34 | 12 | 15 | 8 | 8.0 | 17 | 84 |
| 22 | 46 | 52 | 14 | 32 | 29 | 43 | 15 | 18 | 8 | 7.8 | 14 | 57 |
| 23 | 53 | 60 | 9 | 17 | 34 | 50 | 15 | 17 | 8 | 7.6 | 23 | 72 |
| 24 | 66 | 105 | 8 | 13 | 41 | 63 | 15 | 17 | 8 | 7.6 | 21 | 55 |
| 25 | 87 | 169 | 7 | 11 | 48 | 78 | 15 | 16 | 8 | 7.6 | 22 | 53 |
| 26 | 60 | 124 | 8 | 12 | 51 | 77 | 15 | 16 | 8 | 7.3 | 23 | 56 |
| 27 | 44 | 78 | 8 | 12 | 34 | 53 | 15 | 15 | 8 | 7.3 | 22 | 50 |
| 28 | 36 | 43 | 9 | 13 | 22 | 35 | 15 | 15 | 8 | 7.3 | 29 | 61 |
| 29 | 30 | 34 | 9 | 12 | 15 | 23 | 18 | 18 | --- | --- | 30 | 59 |
| 30 | 26 | 28 | 8 | 10 | 12 | 19 | 18 | 18 | --- | --- | 37 | 69 |
| 31 | 46 | 48 | --- | --- | 9 | 15 | 18 | 17 | --- | --- | 38 | 67 |
| TOTAL | --- | 1996 | --- | 1995 | --- | 930 | --- | 375.1 | --- | 346.4 | --- | 2261 |

05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 44 | 75 | 66 | 82 | 103 | 114 | 50 | 47 | 96 | 73 | 48 | 37 |
| 2 | 41 | 67 | 64 | 78 | 103 | 110 | 50 | 46 | 110 | 83 | 53 | 40 |
| 3 | 31 | 52 | 62 | 72 | 104 | 108 | 50 | 45 | 119 | 87 | 59 | 44 |
| 4 | 31 | 52 | 61 | 69 | 90 | 93 | 50 | 44 | 106 | 77 | 64 | 47 |
| 5 | 32 | 57 | 64 | 72 | 86 | 87 | 50 | 43 | 94 | 67 | 67 | 53 |
| 6 | 33 | 61 | 67 | 76 | 91 | 94 | 52 | 44 | 83 | 63 | 69 | 52 |
| 7 | 36 | 63 | 71 | 79 | 95 | 97 | 55 | 47 | 74 | 61 | 72 | 52 |
| 8 | 44 | 72 | 75 | 81 | 98 | 99 | 56 | 47 | 70 | 61 | 76 | 54 |
| 9 | 55 | 82 | 78 | 84 | 99 | 96 | 57 | 50 | 67 | 57 | 80 | 63 |
| 10 | 64 | 92 | 82 | 86 | 98 | 95 | 59 | 58 | 63 | 52 | 75 | 104 |
| 11 | 62 | 87 | 85 | 87 | 92 | 94 | 69 | 67 | 56 | 44 | 69 | 133 |
| 12 | 59 | 81 | 84 | 89 | 85 | 88 | 81 | 84 | 56 | 43 | 63 | 136 |
| 13 | 55 | 74 | 82 | 89 | 74 | 74 | 91 | 95 | 56 | 42 | 43 | 89 |
| 14 | 45 | 64 | 78 | 95 | 64 | 64 | 88 | 85 | 57 | 44 | 68 | 118 |
| 15 | 37 | 58 | 68 | 102 | 59 | 63 | 83 | 76 | 60 | 52 | 56 | 70 |
| 16 | 33 | 56 | 56 | 93 | 66 | 73 | 79 | 77 | 64 | 55 | 53 | 55 |
| 17 | 38 | 63 | 50 | 94 | 75 | 77 | 76 | 82 | 67 | 54 | 50 | 49 |
| 18 | 46 | 69 | 47 | 122 | 81 | 79 | 76 | 74 | 66 | 50 | 48 | 51 |
| 19 | 56 | 78 | 43 | 112 | 89 | 83 | 76 | 67 | 64 | 48 | 51 | 55 |
| 20 | 64 | 86 | 53 | 134 | 99 | 91 | 76 | 65 | 62 | 46 | 40 | 41 |
| 21 | 64 | 84 | 46 | 92 | 110 | 99 | 79 | 63 | 59 | 43 | 37 | 42 |
| 22 | 63 | 79 | 75 | 116 | 119 | 109 | 81 | 63 | 56 | 40 | 57 | 78 |
| 23 | 63 | 74 | 64 | 86 | 115 | 109 | 84 | 65 | 53 | 37 | 53 | 78 |
| 24 | 56 | 67 | 75 | 96 | 110 | 104 | 86 | 65 | 51 | 36 | 52 | 73 |
| 25 | 58 | 69 | 80 | 99 | 106 | 96 | 84 | 65 | 53 | 37 | 92 | 282 |
| 26 | 64 | 77 | 67 | 82 | 100 | 88 | 83 | 67 | 55 | 43 | 61 | 172 |
| 27 | 70 | 88 | 59 | 73 | 90 | 80 | 82 | 66 | 58 | 58 | 61 | 156 |
| 28 | 70 | 91 | 72 | 91 | 81 | 82 | 82 | 66 | 58 | 69 | 61 | 136 |
| 29 | 68 | 83 | 86 | 110 | 70 | 77 | 82 | 66 | 53 | 55 | 77 | 197 |
| 30 | 67 | 82 | 92 | 112 | 50 | 49 | 82 | 65 | 47 | 41 | 68 | 221 |
| 31 | --- | --- | 98 | 114 | --- | --- | 85 | 66 | 44 | 35 | --- | --- |
| TOTAL | --- | 2183 | --- | 2867 | --- | 2672 | --- | 1960 | --- | 1653 | --- | 2778 |

TOTAL LOAD FOR YEAR: 22016.5 TONS.

## 05437500 ROCK RIVER AT ROCKTON, IL

LOCATION.--Lat 42°26'55", long 89°04'11", in SW 1/4 NE 1/4 sec.24, T.46 N., R.1 E., Winnebago County, Hydrologic Unit 07090005, on right bank 750 ft downstream from State Highway 75 in Rockton, 1.0 mi downstream from Pecatonica River, and at mile 156.1.

DRAINAGE AREA.--6,363 mi$^2$.

PERIOD OF RECORD.--June 1903 to July 1906, October 1906 to March 1909, July 1914 to September 1919, October 1939 to current year. Published as "below mouth of Pecatonica River at Rockton" 1903-9; as "at Rockford" 1914-19. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORD.--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M). WDR IL-75-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 707.94 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at site 800 ft upstream at datum about 1 ft higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at site 800 ft upstream at datum about 2 ft higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi downstream, at different datum. Oct. 1, 1939, to Aug. 10, 1973, at site 800 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 3, 4, and Dec. 15 to Feb. 5. Water-discharge records good except those for estimated daily discharges, which are poor. Low flow regulated by powerplant above station.

AVERAGE DISCHARGE.--54 years (water years 1904-5, 1915-19, 1940-86), 4,083 ft$^3$/s, 8.71 in/yr, discharge for site at Rockford adjusted for difference in drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft$^3$/s, Mar. 30, 1916, gage height, 13.06 ft, site and datum then in use; minimum daily, 501 ft$^3$/s, Sept. 14, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1937 reached a stage of 14.6 ft (backwater from ice), from painted floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,700 ft$^3$/s, Mar. 28, gage height, 10.50 ft; maximum gage height, 13.28 ft, Dec. 19 (backwater from ice); minimum daily, 2,830 ft$^3$/s, Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3600 | 7290 | 10600 | 6400 | 4500 | 5190 | 15500 | 7240 | 5050 | 4620 | 4380 | 3560 |
| 2 | 3520 | 10400 | 11900 | 6300 | 4500 | 5190 | 15100 | 7100 | 4850 | 4710 | 4070 | 3450 |
| 3 | 3500 | 13100 | 11500 | 6200 | 4500 | 5190 | 14700 | 6940 | 4550 | 4600 | 4000 | 3570 |
| 4 | 3640 | 13000 | 11600 | 6000 | 4800 | 5270 | 14200 | 6720 | 4250 | 4710 | 3850 | 3570 |
| 5 | 3650 | 11500 | 11300 | 5900 | 7500 | 5700 | 13800 | 6300 | 4270 | 4520 | 3610 | 3460 |
| 6 | 3560 | 11300 | 10300 | 5800 | 8020 | 6110 | 13100 | 6100 | 3970 | 4540 | 3780 | 3480 |
| 7 | 3500 | 11400 | 9950 | 5700 | 7930 | 5940 | 12700 | 6020 | 3770 | 4670 | 3890 | 3440 |
| 8 | 3440 | 11100 | 9780 | 5700 | 7750 | 5570 | 12300 | 5980 | 3900 | 4700 | 3950 | 3300 |
| 9 | 3860 | 10700 | 9460 | 5600 | 7660 | 5540 | 12100 | 5850 | 3940 | 5060 | 3980 | 3350 |
| 10 | 4770 | 10800 | 9200 | 5600 | 7240 | 9800 | 11700 | 5640 | 3810 | 4990 | 4020 | 3840 |
| 11 | 5040 | 10700 | 9000 | 5700 | 7190 | 13700 | 11300 | 5390 | 3630 | 5110 | 3870 | 4280 |
| 12 | 5280 | 10400 | 8540 | 5700 | 6830 | 12600 | 10800 | 5150 | 3680 | 5080 | 3840 | 5070 |
| 13 | 5690 | 10400 | 7860 | 5700 | 6500 | 12800 | 10400 | 5090 | 3590 | 4960 | 3740 | 5440 |
| 14 | 5870 | 10600 | 6840 | 5600 | 6350 | 14300 | 10200 | 5120 | 3770 | 4740 | 3780 | 6190 |
| 15 | 5860 | 10500 | 5800 | 5500 | 6470 | 14400 | 10200 | 5230 | 3980 | 4840 | 3680 | 6540 |
| 16 | 5920 | 10700 | 6400 | 5400 | 6360 | 14300 | 10000 | 5650 | 3980 | 5300 | 3780 | 6580 |
| 17 | 5710 | 10800 | 5600 | 5300 | 6010 | 14700 | 9920 | 5950 | 4110 | 5060 | 3660 | 6450 |
| 18 | 5380 | 11600 | 6000 | 5200 | 5810 | 14900 | 9590 | 7400 | 4300 | 5380 | 3770 | 6670 |
| 19 | 5640 | 12700 | 6800 | 5000 | 5690 | 15600 | 9190 | 7770 | 4130 | 5380 | 3500 | 6790 |
| 20 | 5920 | 12800 | 7800 | 4750 | 5770 | 15800 | 8920 | 7900 | 3990 | 5440 | 3360 | 6900 |
| 21 | 5910 | 12700 | 9000 | 4750 | 5930 | 16000 | 8890 | 7770 | 3840 | 5320 | 3230 | 7150 |
| 22 | 5900 | 12900 | 8000 | 4700 | 5820 | 16300 | 8640 | 7570 | 3710 | 5470 | 3220 | 7490 |
| 23 | 5760 | 12900 | 7400 | 4700 | 5830 | 16400 | 8310 | 7140 | 3770 | 5110 | 3140 | 8070 |
| 24 | 6170 | 12600 | 7200 | 4850 | 5700 | 16300 | 8030 | 6490 | 3550 | 5080 | 2830 | 8640 |
| 25 | 6300 | 12200 | 7100 | 4650 | 5670 | 16300 | 7850 | 6120 | 3790 | 4900 | 2940 | 11600 |
| 26 | 6440 | 11700 | 7000 | 4400 | 5520 | 16300 | 7840 | 5870 | 3450 | 4970 | 2990 | 13200 |
| 27 | 6550 | 11200 | 6900 | 4200 | 5520 | 16500 | 7540 | 5850 | 3580 | 4800 | 3220 | 13800 |
| 28 | 6560 | 10900 | 6700 | 4500 | 5370 | 16600 | 7310 | 5920 | 3860 | 4750 | 3210 | 13800 |
| 29 | 6330 | 10500 | 6600 | 4500 | --- | 16500 | 7070 | 5800 | 4040 | 4590 | 3180 | 14700 |
| 30 | 5980 | 10100 | 6500 | 4500 | --- | 16300 | 7400 | 5640 | 4340 | 4420 | 3630 | 16400 |
| 31 | 5860 | --- | 6400 | 4500 | --- | 15900 | --- | 5300 | --- | 4350 | 3600 | --- |
| TOTAL | 161110 | 339490 | 255030 | 163300 | 172720 | 382000 | 314600 | 194010 | 119450 | 152170 | 111700 | 210780 |
| MEAN | 5197 | 11320 | 8227 | 5268 | 6169 | 12320 | 10490 | 6258 | 3982 | 4909 | 3603 | 7026 |
| MAX | 6560 | 13100 | 11900 | 6400 | 8020 | 16600 | 15500 | 7900 | 5050 | 5470 | 4380 | 16400 |
| MIN | 3440 | 7290 | 5600 | 4200 | 4500 | 5190 | 7070 | 5090 | 3450 | 4350 | 2830 | 3300 |
| CFSM | .82 | 1.78 | 1.29 | .83 | .97 | 1.94 | 1.65 | .98 | .63 | .77 | .57 | 1.10 |
| IN. | .94 | 1.98 | 1.49 | 95 | 1.01 | 2.23 | 1.84 | 1.13 | .70 | .89 | .65 | 1.23 |

CAL YR 1985 TOTAL 2223460 MEAN 6092 MAX 20400 MIN 1580 CFSM .96 IN. 13.00
WTR YR 1986 TOTAL 2576360 MEAN 7059 MAX 16600 MIN 2830 CFSM 1.11 IN. 15.06

## 05527800 DES PLAINES RIVER AT RUSSELL, IL

LOCATION.--Lat 42°29'22", long 87°55'32", in SE 1/4 sec.3, T.46 N., R.11 E., Lake County, Hydrologic Unit 07120004, on right bank at upstream side of Russell Road bridge, 0.3 mi west of Russell, 7.2 mi upstream from Mill Creek, and at mile 109.3.

DRAINAGE AREA.--123 mi$^2$.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1962-66. June 1967 to current year.

REVISED RECORDS.--WDR IL-75-1: Drainage area. WDR IL-76-1: 1960-68(M), 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 662.00 ft above National Geodetic Vertical Datum of 1929. Oct. 17, 1961, to June 29, 1967, crest-stage gage at left downstream side of bridge at datum 4.29 ft higher.

REMARKS.--Estimated daily discharges: Dec. 12 to Feb. 7, Feb. 13-21, and Aug. 9-19. Water-discharge records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 101 ft$^3$/s, 11.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft$^3$/s, Mar. 21, 1979, gage height, 9.69 ft; maximum gage height, 10.75 ft, Mar. 6, 1976, and Sept. 27, 1986; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft$^3$/s, Sept. 27, gage height, 10.75 ft; minimum daily, 3.0 ft$^3$/s, Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.2 | 60 | 316 | 31 | 37 | 70 | 122 | 44 | 145 | 223 | 47 | 20 |
| 2 | 3.0 | 178 | 400 | 31 | 43 | 66 | 106 | 44 | 125 | 232 | 42 | 15 |
| 3 | 3.0 | 251 | 418 | 31 | 56 | 66 | 95 | 39 | 93 | 232 | 34 | 13 |
| 4 | 4.0 | 301 | 439 | 31 | 100 | 77 | 87 | 34 | 62 | 226 | 28 | 11 |
| 5 | 5.2 | 336 | 463 | 32 | 180 | 114 | 83 | 30 | 58 | 213 | 22 | 10 |
| 6 | 11 | 358 | 462 | 32 | 250 | 153 | 78 | 27 | 67 | 196 | 30 | 8.7 |
| 7 | 8.3 | 367 | 435 | 30 | 290 | 166 | 73 | 25 | 78 | 193 | 70 | 8.6 |
| 8 | 8.7 | 355 | 396 | 28 | 304 | 167 | 65 | 21 | 73 | 201 | 93 | 8.0 |
| 9 | 17 | 336 | 352 | 28 | 279 | 160 | 57 | 18 | 59 | 225 | 88 | 7.1 |
| 10 | 58 | 336 | 311 | 28 | 241 | 345 | 51 | 16 | 50 | 220 | 75 | 19 |
| 11 | 84 | 327 | 271 | 28 | 183 | 615 | 47 | 14 | 65 | 242 | 64 | 106 |
| 12 | 98 | 317 | 220 | 28 | 122 | 871 | 43 | 14 | 71 | 275 | 57 | 158 |
| 13 | 106 | 317 | 180 | 28 | 76 | 974 | 40 | 17 | 63 | 304 | 38 | 177 |
| 14 | 101 | 316 | 150 | 27 | 60 | 887 | 39 | 18 | 51 | 302 | 37 | 186 |
| 15 | 93 | 308 | 120 | 26 | 50 | 764 | 51 | 17 | 50 | 289 | 36 | 185 |
| 16 | 75 | 319 | 95 | 26 | 45 | 656 | 69 | 20 | 56 | 287 | 32 | 170 |
| 17 | 54 | 338 | 80 | 30 | 40 | 560 | 76 | 35 | 56 | 273 | 27 | 137 |
| 18 | 41 | 369 | 66 | 48 | 38 | 492 | 72 | 126 | 47 | 256 | 22 | 92 |
| 19 | 98 | 477 | 55 | 80 | 40 | 462 | 64 | 161 | 37 | 239 | 19 | 61 |
| 20 | 161 | 582 | 52 | 100 | 65 | 429 | 55 | 169 | 38 | 225 | 17 | 51 |
| 21 | 188 | 647 | 49 | 120 | 90 | 390 | 50 | 172 | 40 | 208 | 15 | 48 |
| 22 | 211 | 682 | 47 | 130 | 116 | 351 | 47 | 170 | 39 | 191 | 14 | 63 |
| 23 | 222 | 676 | 46 | 150 | 120 | 316 | 43 | 159 | 34 | 171 | 12 | 217 |
| 24 | 223 | 628 | 45 | 140 | 109 | 275 | 41 | 137 | 28 | 144 | 11 | 251 |
| 25 | 213 | 566 | 41 | 125 | 94 | 245 | 40 | 107 | 23 | 120 | 10 | 529 |
| 26 | 193 | 507 | 39 | 100 | 84 | 218 | 40 | 78 | 21 | 104 | 12 | 1080 |
| 27 | 163 | 439 | 37 | 80 | 77 | 194 | 40 | 70 | 93 | 87 | 44 | 1600 |
| 28 | 128 | 384 | 35 | 64 | 73 | 183 | 38 | 104 | 178 | 73 | 66 | 1500 |
| 29 | 93 | 336 | 34 | 54 | --- | 173 | 32 | 131 | 193 | 62 | 56 | 1470 |
| 30 | 65 | 300 | 33 | 43 | --- | 156 | 37 | 145 | 207 | 52 | 37 | 1430 |
| 31 | 51 | --- | 32 | 35 | --- | 138 | --- | 151 | --- | 44 | 27 | --- |
| TOTAL | 2782.4 | 11713 | 5719 | 1764 | 3262 | 10733 | 1781 | 2313 | 2200 | 6109 | 1182 | 9631.4 |
| MEAN | 89.8 | 390 | 184 | 56.9 | 117 | 346 | 59.4 | 74.6 | 73.3 | 197 | 38.1 | 321 |
| MAX | 223 | 682 | 463 | 150 | 304 | 974 | 122 | 172 | 207 | 304 | 93 | 1600 |
| MIN | 3.0 | 60 | 32 | 26 | 37 | 66 | 32 | 14 | 21 | 44 | 10 | 7.1 |
| CFSM | .73 | 3.17 | 1.50 | .46 | .95 | 2.81 | .48 | .61 | .60 | 1.60 | .31 | 2.61 |
| IN. | .84 | 3.54 | 1.73 | .53 | .99 | 3.25 | .54 | .70 | .67 | 1.85 | .36 | 2.91 |

CAL YR 1985 TOTAL 45771.3 MEAN 125 MAX 933 MIN 1.1 CFSM 1.02 IN. 13.84
WTR YR 1986 TOTAL 59189.8 MEAN 162 MAX 1600 MIN 3.0 CFSM 1.32 IN. 17.90

## 05543830 FOX RIVER AT WAUKESHA, WI

LOCATION.--Lat 43°00'17", long 88°14'37", in SW 1/4 sec.3, T.6 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam and 3.2 mi downstream from Pewaukee River.

DRAINAGE AREA.--126 mi$^2$.

PERIOD OF RECORD.--January 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft above National Geodetic Vertical Datum of 1929 (levels by city of Waukesha).

REMARKS.--Estimated daily discharge: None, except for ice periods listed in rating table below. Records good except for ice-affected periods, which are fair. There is occasional regulation from mill dam 1.0 mi upstream.

AVERAGE DISCHARGE.--23 years, 98.6 ft$^3$/s, 10.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft$^3$/s Apr. 22, 1973, gage height, 7.42 ft; minimum, 3.0 ft$^3$/s Jan. 1, 1964, gage height, 1.52 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 955 ft$^3$/s Sept. 28, gage height, 5.61 ft; minimum, 9.2 ft$^3$/s Aug. 22, gage height, 1.78 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Dec. 14 to Jan. 10, Jan. 14, and Jan. 26 to Feb. 3.)

| | | | |
|---|---|---|---|
| 1.9 | 15 | 3.0 | 166 |
| 2.1 | 30 | 4.0 | 411 |
| 2.4 | 64 | 5.0 | 729 |
| | | 5.5 | 912 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | 187 | 272 | 74 | 56 | 86 | 226 | 84 | 43 | 175 | 86 | 92 |
| 2 | 20 | 350 | 347 | 72 | 60 | 87 | 213 | 78 | 41 | 165 | 77 | 78 |
| 3 | 22 | 382 | 353 | 70 | 64 | 89 | 202 | 71 | 40 | 153 | 69 | 67 |
| 4 | 51 | 341 | 316 | 68 | 133 | 95 | 177 | 68 | 41 | 125 | 64 | 63 |
| 5 | 63 | 297 | 291 | 68 | 189 | 109 | 191 | 52 | 40 | 98 | 49 | 62 |
| 6 | 44 | 272 | 278 | 66 | 143 | 112 | 182 | 59 | 38 | 87 | 152 | 59 |
| 7 | 35 | 250 | 260 | 64 | 135 | 89 | 178 | 57 | 50 | 83 | 302 | 54 |
| 8 | 34 | 233 | 241 | 64 | 134 | 101 | 168 | 50 | 45 | 163 | 276 | 53 |
| 9 | 67 | 241 | 227 | 66 | 121 | 98 | 160 | 46 | 41 | 156 | 236 | 56 |
| 10 | 110 | 281 | 220 | 68 | 111 | 370 | 156 | 43 | 55 | 130 | 259 | 198 |
| 11 | 77 | 290 | 216 | 71 | 102 | 592 | 144 | 42 | 75 | 133 | 272 | 443 |
| 12 | 103 | 288 | 191 | 70 | 92 | 659 | 131 | 50 | 89 | 144 | 258 | 546 |
| 13 | 117 | 314 | 160 | 66 | 84 | 708 | 121 | 50 | 76 | 183 | 227 | 648 |
| 14 | 89 | 336 | 150 | 64 | 79 | 720 | 137 | 47 | 66 | 171 | 210 | 731 |
| 15 | 70 | 327 | 130 | 60 | 75 | 643 | 180 | 51 | 66 | 188 | 180 | 670 |
| 16 | 66 | 336 | 120 | 64 | 73 | 557 | 144 | 53 | 66 | 245 | 142 | 570 |
| 17 | 68 | 340 | 120 | 68 | 67 | 518 | 156 | 86 | 56 | 243 | 113 | 497 |
| 18 | 66 | 398 | 110 | 72 | 66 | 578 | 144 | 128 | 48 | 204 | 89 | 434 |
| 19 | 80 | 459 | 100 | 80 | 105 | 655 | 130 | 114 | 45 | 177 | 70 | 385 |
| 20 | 77 | 462 | 96 | 79 | 121 | 564 | 121 | 89 | 44 | 149 | 61 | 328 |
| 21 | 71 | 432 | 94 | 80 | 105 | 557 | 118 | 77 | 38 | 128 | 64 | 294 |
| 22 | 67 | 389 | 90 | 87 | 106 | 488 | 112 | 69 | 49 | 115 | 44 | 296 |
| 23 | 85 | 335 | 90 | 86 | 101 | 413 | 104 | 64 | 55 | 105 | 46 | 339 |
| 24 | 148 | 288 | 88 | 83 | 97 | 355 | 99 | 59 | 60 | 88 | 46 | 375 |
| 25 | 163 | 260 | 86 | 82 | 95 | 325 | 98 | 55 | 52 | 126 | 45 | 446 |
| 26 | 135 | 237 | 84 | 70 | 95 | 326 | 121 | 51 | 44 | 119 | 155 | 622 |
| 27 | 115 | 219 | 82 | 66 | 93 | 329 | 138 | 57 | 320 | 95 | 239 | 718 |
| 28 | 100 | 201 | 80 | 62 | 89 | 308 | 127 | 62 | 322 | 151 | 192 | 703 |
| 29 | 88 | 177 | 80 | 60 | --- | 286 | 100 | 57 | 260 | 131 | 147 | 834 |
| 30 | 79 | 176 | 78 | 58 | --- | 271 | 89 | 50 | 198 | 103 | 123 | 900 |
| 31 | 76 | --- | 76 | 56 | --- | 246 | --- | 47 | --- | 93 | 109 | --- |
| TOTAL | 2410 | 9098 | 5126 | 2164 | 2791 | 11334 | 4367 | 1966 | 2463 | 4426 | 4402 | 11561 |
| MEAN | 77.7 | 303 | 165 | 69.8 | 99.7 | 366 | 146 | 63.4 | 82.1 | 143 | 142 | 385 |
| MAX | 163 | 462 | 353 | 87 | 189 | 720 | 226 | 128 | 322 | 245 | 302 | 900 |
| MIN | 20 | 176 | 76 | 56 | 56 | 86 | 89 | 42 | 38 | 83 | 44 | 53 |
| CFSM | .62 | 2.41 | 1.31 | .55 | .79 | 2.91 | 1.16 | .50 | .65 | 1.14 | 1.13 | 3.06 |
| IN. | .71 | 2.69 | 1.51 | .64 | .82 | 3.35 | 1.29 | .58 | .73 | 1.31 | 1.30 | 3.41 |

CAL YR 1985 TOTAL 44887 MEAN 123 MAX 635 MIN 14 CFSM .98 IN 13.25
WTR YR 1986 TOTAL 62108 MEAN 170 MAX 900 MIN 20 CFSM 1.35 IN 18.34

## 05544200 MUKWONAGO RIVER AT MUKWONAGO, WI

**LOCATION.**--Lat 42°51'24", long 88°19'40", in NE 1/4 NE 1/4 sec.35, T.5 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 100 ft upstream from bridge on State Highway 83 in Mukwonago, 100 ft downstream from railroad bridge, and 800 ft downstream from dam.

**DRAINAGE AREA.**--74.1 mi$^2$.

**PERIOD OF RECORD.**--July 1973 to current year.

**REVISED RECORDS.**--WDR WI-79-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 779.23 ft above National Geodetic Vertical Datum of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Oct. 19, 1981, at datum 0.85 ft higher.

**REMARKS.**--Estimated daily discharges: Oct. 1-7, Jan. 1-28, June 18, and ice period listed in rating table below. Records good except for estimated daily discharges, which are poor. Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream.

**AVERAGE DISCHARGE.**--13 years, 59.7 ft$^3$/s, 10.94 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 300 ft$^3$/s Mar. 5, 1976, gage height, 2.50 ft; maximum gage height, 3.55 ft, Sept. 29, 1986; minimum daily, 1.8 ft$^3$/s Dec. 23. 1976.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 278 ft$^3$/s Sept. 29, gage height, 3.55 ft; minimum daily, 15 ft$^3$/s Dec. 24.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Oct. 15 to Nov. 23 and Sept. 10-16, 22-30; stage-discharge relation affected by ice Nov. 24 and Dec. 28.)

| | | | |
|---|---|---|---|
| 2.0 | 15 | 2.6 | 103 |
| 2.2 | 34 | 3.0 | 199 |
| 2.4 | 64 | 3.3 | 271 |

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28 | 79 | 88 | 47 | 60 | 67 | 105 | 61 | 63 | 98 | 34 | 33 |
| 2 | 27 | 125 | 92 | 45 | 60 | 67 | 99 | 59 | 52 | 58 | 24 | 34 |
| 3 | 26 | 133 | 96 | 45 | 60 | 64 | 96 | 58 | 41 | 56 | 24 | 33 |
| 4 | 30 | 174 | 100 | 44 | 91 | 64 | 95 | 60 | 42 | 57 | 25 | 32 |
| 5 | 41 | 191 | 103 | 44 | 110 | 62 | 96 | 58 | 45 | 55 | 25 | 31 |
| 6 | 38 | 148 | 101 | 44 | 111 | 60 | 95 | 57 | 49 | 54 | 33 | 29 |
| 7 | 37 | 125 | 97 | 44 | 106 | 69 | 94 | 57 | 56 | 51 | 62 | 30 |
| 8 | 42 | 112 | 91 | 44 | 103 | 72 | 91 | 56 | 60 | 56 | 78 | 38 |
| 9 | 66 | 102 | 87 | 44 | 96 | 66 | 77 | 33 | 77 | 76 | 80 | 46 |
| 10 | 97 | 100 | 84 | 45 | 92 | 105 | 61 | 19 | 84 | 83 | 79 | 88 |
| 11 | 98 | 75 | 81 | 48 | 88 | 145 | 60 | 23 | 74 | 124 | 75 | 115 |
| 12 | 126 | 82 | 80 | 52 | 81 | 195 | 60 | 29 | 68 | 128 | 68 | 118 |
| 13 | 143 | 92 | 78 | 52 | 74 | 178 | 60 | 36 | 65 | 124 | 63 | 116 |
| 14 | 133 | 93 | 78 | 52 | 69 | 152 | 62 | 41 | 64 | 116 | 61 | 113 |
| 15 | 124 | 91 | 76 | 52 | 65 | 155 | 64 | 90 | 63 | 69 | 58 | 109 |
| 16 | 64 | 133 | 75 | 54 | 65 | 157 | 66 | 129 | 53 | 57 | 57 | 105 |
| 17 | 40 | 149 | 74 | 60 | 51 | 156 | 68 | 117 | 29 | 62 | 56 | 54 |
| 18 | 45 | 132 | 72 | 64 | 35 | 157 | 70 | 114 | 34 | 61 | 27 | 40 |
| 19 | 51 | 110 | 68 | 64 | 42 | 180 | 72 | 68 | 38 | 56 | 18 | 46 |
| 20 | 55 | 120 | 66 | 64 | 50 | 186 | 67 | 56 | 37 | 54 | 22 | 52 |
| 21 | 59 | 142 | 62 | 64 | 59 | 152 | 70 | 60 | 37 | 52 | 23 | 58 |
| 22 | 62 | 126 | 62 | 62 | 65 | 116 | 71 | 61 | 37 | 48 | 25 | 96 |
| 23 | 89 | 87 | 34 | 62 | 66 | 133 | 68 | 78 | 36 | 41 | 26 | 122 |
| 24 | 125 | 86 | 15 | 62 | 65 | 127 | 66 | 78 | 40 | 42 | 26 | 97 |
| 25 | 115 | 84 | 24 | 62 | 61 | 116 | 64 | 71 | 41 | 44 | 25 | 107 |
| 26 | 101 | 86 | 33 | 60 | 63 | 120 | 63 | 49 | 39 | 42 | 60 | 134 |
| 27 | 91 | 83 | 38 | 50 | 65 | 118 | 60 | 46 | 73 | 41 | 74 | 134 |
| 28 | 84 | 80 | 54 | 52 | 66 | 120 | 61 | 53 | 61 | 42 | 69 | 157 |
| 29 | 53 | 76 | 56 | 52 | --- | 120 | 60 | 67 | 64 | 40 | 47 | 258 |
| 30 | 43 | 76 | 55 | 54 | --- | 116 | 59 | 69 | 118 | 41 | 29 | 237 |
| 31 | 44 | --- | 50 | 59 | --- | 111 | --- | 66 | --- | 42 | 32 | --- |
| TOTAL | 2177 | 3292 | 2170 | 1647 | 2019 | 3706 | 2200 | 1919 | 1640 | 1970 | 1405 | 2662 |
| MEAN | 70.2 | 110 | 70.0 | 53.1 | 72.1 | 120 | 73.3 | 61.9 | 54.7 | 63.5 | 45.3 | 88.7 |
| MAX | 143 | 191 | 103 | 64 | 111 | 195 | 105 | 129 | 118 | 128 | 80 | 258 |
| MIN | 26 | 75 | 15 | 44 | 35 | 60 | 59 | 19 | 29 | 40 | 18 | 29 |
| CFSM | .95 | 1.48 | .95 | .72 | .97 | 1.62 | .99 | .84 | .74 | .86 | .61 | 1.20 |
| IN. | 1.09 | 1.65 | 1.09 | .83 | 1.01 | 1.86 | 1.10 | .96 | .82 | .99 | .71 | 1.34 |

CAL YR 1985 TOTAL 22115.9 MEAN 60.6 MAX 191 MIN 9.9 CFSM .82 IN 11.10
WTR YR 1986 TOTAL 26807.0 MEAN 73.4 MAX 258 MIN 15 CFSM .99 IN 13.46

## 424848088083100 WIND LAKE AT WIND LAKE, WI

LOCATION.--Lat 42°48'48", long 88°08'31", in NE 1/4 NW 1/4 sec.16, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

DRAINAGE AREA.--40.2 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--March 6, 1985, to current year.

GAGE.--Lake stages read at the outlet of the lake by M. Reisner.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 8.54 ft Apr. 17, 24, 29, 1985; minimum observed, 6.95 ft Mar. 28, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 8.48 ft, Aug. 3; minimum observed, 6.95 ft, Mar. 28.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | | | | --- | --- | --- | 8.29 | --- | --- | --- |
| 2 | --- | --- | | | | --- | 7.83 | --- | --- | 8.15 | --- | --- |
| 3 | --- | --- | | | | --- | --- | 8.22 | --- | --- | 8.48 | --- |
| 4 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 5 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 6 | --- | --- | | | | --- | --- | --- | --- | 8.19 | --- | 8.23 |
| 7 | 7.20 | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 8 | --- | 7.82 | | | | --- | 8.35 | --- | 8.29 | 8.19 | --- | --- |
| 9 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | | | | --- | --- | 8.17 | --- | --- | --- | --- |
| 11 | --- | --- | | | | --- | --- | --- | --- | --- | 8.25 | --- |
| 12 | 7.39 | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 13 | --- | --- | | | | 7.90 | 8.00 | --- | --- | --- | --- | 8.06 |
| 14 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 15 | --- | --- | | | | --- | --- | --- | 8.27 | --- | 8.29 | --- |
| 16 | --- | 8.43 | | | | --- | --- | --- | --- | --- | --- | --- |
| 17 | 7.42 | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 19 | --- | --- | | | | 8.15 | 8.17 | 8.30 | --- | 8.44 | --- | --- |
| 20 | --- | --- | | | | --- | --- | --- | --- | --- | --- | 8.27 |
| 21 | --- | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | | | | --- | --- | --- | 8.25 | --- | --- | --- |
| 23 | --- | 8.30 | | | | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | | | | --- | --- | --- | --- | --- | 8.43 | --- |
| 25 | 7.56 | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 26 | --- | --- | | | | 7.06 | --- | --- | 8.22 | --- | --- | --- |
| 27 | --- | --- | | | | --- | 8.23 | --- | --- | 8.42 | --- | --- |
| 28 | --- | --- | | | | 6.95 | --- | 8.33 | --- | --- | --- | 8.43 |
| 29 | 7.46 | --- | | | | --- | --- | --- | --- | --- | --- | --- |
| 30 | --- | 7.83 | | | | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | | | | --- | --- | --- | --- | --- | 8.24 | --- |

## 424915088083900 WIND LAKE AT WIND LAKE, WI--CONTINUED

### WATER-QUALITY RECORDS

LOCATION.--Lat 42°49'15", long 88°08'39", in NW 1/4 SW 1/4 sec.9, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

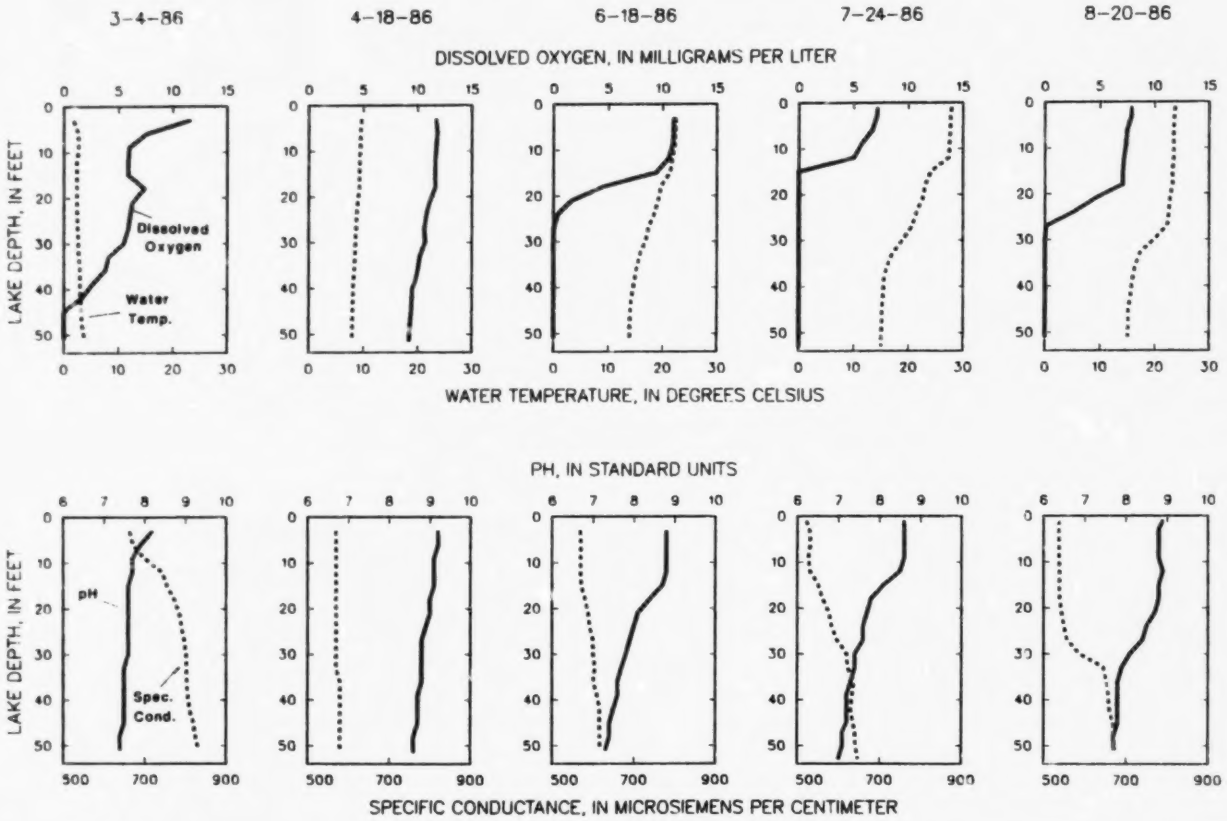
PERIOD OF RECORD.--February 20, 1984, to current year.

REMARKS.--Lake sampled near center at a depth of 52 feet.

WATER QUALITY DATA, MARCH 4 TO AUGUST 20, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 4 | | Apr. 18 | | June 18 | | July 24 | | Aug. 20 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3 | 51 | 3 | 51.5 | 3 | 51 | 3 | 52 | 3 | 51 |
| Specific conductance (uS) | 664 | 833 | 570 | 580 | 569 | 618 | 530 | 648 | 537 | 674 |
| pH | 8.2 | 7.4 | 9.2 | 8.6 | 8.8 | 7.3 | 8.6 | 7.0 | 8.8 | 7.7 |
| Water temperature (°C) | 2.0 | 4.0 | 9.5 | 8.0 | 22.5 | 14.0 | 27.5 | 15.0 | 23.5 | 15.0 |
| Color (Pt-Co. scale) | -- | -- | 40 | 40 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 5.6 | 12 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- | -- | -- 0.6 -- | | -- 1.2 -- | | -- 0.4 -- | | -- 0.4 -- | |
| Dissolved oxygen | 11.7 | 0.0 | 11.7 | 9.2 | 11.0 | 0.0 | 7.2 | 0.0 | 7.9 | 0.0 |
| Hardness, as $CaCO_3$ | -- | -- | 230 | 230 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 48 | 49 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 27 | 27 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 23 | 24 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 2.7 | 2.7 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 161 | 161 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 70 | 70 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 48 | 48 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 0.0 | 0.0 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180 C | -- | -- | 346 | 340 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .38 | .38 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | .02 | .02 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .10 | .13 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | 1.4 | 1.4 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.9 | 1.9 | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .067 | .073 | .043 | .370 | .041 | .470 | .042 | .560 |
| Phosphorus, ortho, diss (as P) | -- | -- | .003 | .003 | -- | .310 | -- | .430 | -- | .360 |
| Iron, dissolved (Fe) ug/L | -- | -- | 24 | 9 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | 11 | 4 | -- | -- | -- | -- | -- | -- |
| Chlorophyll *a*, phyto. (ug/L) | -- | -- | 58[1/] | -- | 37 | -- | 36 | -- | 34 | -- |

[1/] Adjusted from 37 ug/L by the Wisconsin State Laboratory of Hygiene.



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## 424727088332300 PLEASANT LAKE NEAR LA GRANGE, WI

### LAKE-STAGE RECORDS

LOCATION.--Lat 42°47'27", long 88°33'23", in SW 1/4 sec.24, T.4N., R.16 E., Walworth County, Hydrologic Unit 07120006, 2.6 mi southeast of LaGrange.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Staff gage read by Gordon Dobbs. Elevation of gage is 879 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.60 ft, Sept. 29, 1986; minimum observed, 7.69 ft, Oct. 6, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.60 ft, Sept. 29; minimum observed, 7.80 ft, Oct. 6.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT | DATE | GAGE HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 6 | 7.80 | NOV. 3 | 8.26 | MAY 25 | 8.40 | JUNE 22 | 8.35 | JULY 20 | 8.38 | SEPT. 1 | 8.20 |
| OCT. 12 | 8.04 | NOV. 10 | 8.26 | MAY 31 | 8.40 | JUNE 29 | 8.50 | JULY 27 | 8.30 | SEPT. 7 | 8.10 |
| OCT. 20 | 8.05 | NOV. 17 | 8.30 | JUNE 8 | 8.35 | JULY 3 | 8.38 | AUG. 3 | 8.20 | SEPT. 14 | 8.25 |
| OCT. 26 | 8.10 | MAY 18 | 8.50 | JUNE 15 | 8.25 | JULY 13 | 8.50 | AUG. 9 | 8.36 | SEPT. 21 | 8.30 |
|  |  |  |  |  |  |  |  | AUG. 17 | 8.30 | SEPT. 29 | 8.60 |

### WATER-QUALITY RECORDS

LOCATION.--Lat 42°47'16", long 88°33'02", in SE 1/4 sec.24, T.4N., R.16 E., Walworth County, Hydrologic Unit 07120006, near center of lake, and 2.7 mi southeast of LaGrange.

PERIOD OF RECORD.--June 1985 to current year.

REMARKS.--Secchi disc readings made by Gordon Dobbs.

SECCHI DISC TRANSPARENCY (IN METERS) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH | DATE | SECCHI DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT. 6 | 2.4 | NOV. 10 | 3.4 | MAY 25 | 4.3 | JUNE 29 | 2.7 | AUG. 3 | 2.3 | SEPT. 1 | 1.9 |
| OCT. 12 | 2.4 | NOV. 17 | 4.3 | MAY 31 | 4.0 | JULY 3 | 3.2 | AUG. 9 | 2.4 | SEPT. 7 | 1.8 |
| OCT. 20 | 2.4 | MAY 6 | 2.1 | JUNE 8 | 2.7 | JULY 13 | 1.8 | AUG. 17 | 2.1 | SEPT. 14 | 2.0 |
| OCT. 26 | 2.7 | MAY 11 | 2.4 | JUNE 15 | 3.4 | JULY 20 | 2.8 | AUG. 23 | 2.0 | SEPT. 21 | 2.6 |
| NOV. 3 | 3.0 | MAY 18 | 3.7 | JUNE 22 | 3.7 | JULY 27 | 2.9 |  |  |  |  |

## 05546500 FOX RIVER AT WILMOT, WI

**LOCATION.**--Lat 42°30'40", long 88°10'45", in SW 1/4 sec.30, T.1 N., R.20 E., Kenosha County, Hydrologic Unit 07120006, on right bank 100 ft downstream from bridge on County Trunk Highway C, 300 ft upstream from Wilmot Dam, 1.0 mi north of Wisconsin-Illinois State line, and 6.0 mi upstream from Fox Chain of Lakes.

**DRAINAGE AREA.**--868 mi$^2$.

**PERIOD OF RECORD.**--October 1939 to current year.

**REVISED RECORDS.**--WSP 1308: 1943(M), 1945(M). WDR WI-67-1: Drainage area.

**GAGE.**--Water-stage recorder and concrete dam. Datum of gage is 735.22 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1956, nonrecording gage and concrete dam.

**REMARKS.**--Estimated daily discharges: None, except for ice-affected periods, Dec. 2-5 and 15-20. Records good except for ice-affected periods, which are fair. Three 6-ft lift gates in Wilmot Dam were in operation during the year; discharge through gates computed by weir and orifice formulas and added to flow over dam. Gage-height telemeter and data-collection platform at station.

**AVERAGE DISCHARGE.**--47 years, 544 ft$^3$/s, 8.51 in/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 7,520 ft$^3$/s Mar. 31, 1960, gage height, 9.25 ft, from graph based on gage readings; no flow part of day Oct. 26, 1945; minimum daily discharge, 35 ft$^3$/s Sept. 9, 1958.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 3,630 ft$^3$/s Sept. 30, stage rising, peak occurred Oct. 2, 1986; maximum peak discharge, 3,600 ft$^3$/s, Mar. 13, gage height, 7.84 ft; maximum gage height, 8.09 ft, Dec. 4 (backwater from ice); minimum daily, 197 ft$^3$/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 206 | 716 | 1330 | 380 | 461 | 668 | 1310 | 608 | 515 | 1420 | 477 | 463 |
| 2 | 201 | 1280 | 1600 | 333 | 507 | 678 | 1200 | 593 | 521 | 1270 | 478 | 389 |
| 3 | 197 | 1600 | 2000 | 302 | 528 | 681 | 1170 | 544 | 489 | 1110 | 387 | 375 |
| 4 | 220 | 1680 | 2600 | 363 | 611 | 692 | 1140 | 487 | 449 | 938 | 350 | 352 |
| 5 | 292 | 1590 | 2400 | 389 | 1030 | 746 | 1090 | 379 | 491 | 770 | 325 | 334 |
| 6 | 324 | 1490 | 2030 | 409 | 1200 | 804 | 1040 | 405 | 675 | 720 | 516 | 308 |
| 7 | 306 | 1440 | 1590 | 428 | 1240 | 692 | 1020 | 439 | 654 | 831 | 1150 | 248 |
| 8 | 295 | 1360 | 1450 | 431 | 1190 | 739 | 988 | 432 | 603 | 1030 | 1240 | 210 |
| 9 | 341 | 1300 | 1370 | 453 | 1120 | 810 | 932 | 407 | 545 | 1110 | 1070 | 223 |
| 10 | 606 | 1410 | 1320 | 463 | 1010 | 1450 | 895 | 379 | 495 | 1120 | 887 | 374 |
| 11 | 689 | 1530 | 1300 | 460 | 945 | 2820 | 831 | 362 | 500 | 1090 | 770 | 841 |
| 12 | 692 | 1510 | 1240 | 448 | 904 | 3410 | 552 | 359 | 524 | 1070 | 685 | 1190 |
| 13 | 799 | 1480 | 848 | 440 | 833 | 3360 | 573 | 367 | 534 | 1120 | 653 | 1180 |
| 14 | 763 | 1490 | 840 | 432 | 765 | 3310 | 563 | 331 | 524 | 1130 | 669 | 1070 |
| 15 | 691 | 1500 | 820 | 429 | 701 | 3140 | 666 | 371 | 584 | 1050 | 702 | 868 |
| 16 | 634 | 1490 | 820 | 425 | 670 | 3000 | 822 | 452 | 604 | 1080 | 702 | 934 |
| 17 | 573 | 1560 | 800 | 430 | 642 | 2780 | 804 | 534 | 559 | 1120 | 663 | 908 |
| 18 | 534 | 1630 | 800 | 476 | 617 | 2700 | 744 | 783 | 484 | 1050 | 616 | 924 |
| 19 | 653 | 1800 | 780 | 585 | 609 | 2800 | 689 | 926 | 441 | 1230 | 557 | 1000 |
| 20 | 740 | 2030 | 760 | 634 | 674 | 2810 | 660 | 864 | 423 | 1270 | 443 | 986 |
| 21 | 699 | 2080 | 731 | 620 | 724 | 2600 | 666 | 782 | 415 | 1080 | 408 | 1010 |
| 22 | 641 | 2000 | 719 | 634 | 738 | 2480 | 656 | 700 | 394 | 762 | 381 | 1100 |
| 23 | 587 | 1870 | 719 | 660 | 730 | 2360 | 604 | 632 | 388 | 715 | 350 | 1640 |
| 24 | 646 | 1720 | 700 | 647 | 715 | 2220 | 525 | 616 | 403 | 578 | 265 | 1820 |
| 25 | 789 | 1550 | 626 | 622 | 702 | 2050 | 538 | 559 | 379 | 586 | 244 | 2260 |
| 26 | 774 | 1470 | 600 | 595 | 688 | 1980 | 556 | 514 | 330 | 672 | 273 | 2720 |
| 27 | 759 | 1460 | 596 | 508 | 700 | 1960 | 537 | 545 | 737 | 645 | 574 | 2900 |
| 28 | 720 | 1400 | 579 | 493 | 669 | 1860 | 516 | 733 | 1520 | 614 | 595 | 2860 |
| 29 | 656 | 1370 | 580 | 498 | --- | 1740 | 515 | 799 | 1670 | 600 | 565 | 2960 |
| 30 | 619 | 1290 | 565 | 471 | --- | 1620 | 561 | 718 | 1570 | 565 | 531 | 3430 |
| 31 | 591 | --- | 496 | 461 | --- | 1490 | --- | 589 | --- | 524 | 500 | --- |
| TOTAL | 17237 | 46096 | 33609 | 14919 | 21923 | 60450 | 23363 | 17209 | 18420 | 28870 | 18026 | 35877 |
| MEAN | 556 | 1537 | 1084 | 481 | 783 | 1950 | 779 | 555 | 614 | 931 | 581 | 1196 |
| MAX | 799 | 2080 | 2600 | 660 | 1240 | 3410 | 1310 | 926 | 1670 | 1420 | 1240 | 3430 |
| MIN | 197 | 716 | 496 | 302 | 461 | 668 | 515 | 331 | 330 | 524 | 244 | 210 |
| CFSM | .64 | 1.77 | 1.25 | .55 | .90 | 2.25 | .90 | .64 | .71 | 1.07 | .67 | 1.38 |
| IN. | .74 | 1.98 | 1.44 | .64 | .94 | 2.59 | 1.00 | .74 | .79 | 1.24 | .77 | 1.54 |

CAL YR 1985 TOTAL 283756 MEAN 777 MAX 3020 MIN 69 CFSM .90 IN 12.16
WTR YR 1986 TOTAL 335999 MEAN 921 MAX 3430 MIN 197 CFSM 1.06 IN 14.40

## 05548164 POWERS LAKE AT POWERS LAKE, WI

LOCATION.--Lat 42°32'40", long 88°18'41", in NW 1/4 SE 1/4 sec.13, T.1 N., R.18 E., Walworth County, Hydrologic Unit 07120006, 50 ft upstream of Powers Lake outlet at Powers Lake.

DRAINAGE AREA.--3.12 mi$^2$.

### LAKE-STAGE RECORDS

PERIOD OF RECORD.--January 14 to September 29, 1986.

GAGE.--Staff gage read by Robert Tucker, Roland Laughlin, and Ms. Thompson.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.05 ft, Sept. 29; minimum observed, 9.98 ft, Sept. 5.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | --- | --- | --- | --- | --- | --- | --- | --- | 10.02 |
| 2 | | | | --- | --- | 10.16 | --- | --- | --- | 10.35 | --- | 10.03 |
| 3 | | | | --- | --- | --- | --- | --- | 10.14 | --- | 10.13 | 10.02 |
| 4 | | | | --- | --- | 10.13 | --- | --- | --- | --- | 10.10 | 10.00 |
| 5 | | | | --- | 10.20 | --- | --- | --- | --- | 10.33 | --- | 9.98 |
| 6 | | | | --- | --- | --- | --- | --- | --- | --- | 10.22 | --- |
| 7 | | | | --- | --- | --- | 10.36 | 10.19 | --- | --- | --- | --- |
| 8 | | | | --- | --- | --- | --- | --- | --- | 10.45 | 10.20 | --- |
| 9 | | | | --- | --- | --- | --- | --- | --- | --- | 10.17 | --- |
| 10 | | | | --- | 10.19 | --- | --- | --- | --- | 10.55 | 10.15 | 10.06 |
| 11 | | | | --- | --- | --- | --- | --- | 10.11 | --- | 10.12 | --- |
| 12 | | | | --- | --- | 10.37 | --- | --- | --- | --- | 10.10 | 10.07 |
| 13 | | | | --- | --- | --- | --- | --- | --- | --- | 10.08 | 10.06 |
| 14 | | | | 10.08 | --- | --- | --- | 10.14 | --- | --- | 10.10 | 10.05 |
| 15 | | | | --- | --- | --- | 10.30 | --- | --- | --- | 10.11 | 10.05 |
| 16 | | | | --- | 10.15 | --- | --- | --- | --- | --- | --- | 10.05 |
| 17 | | | | --- | --- | 10.47 | 10.29 | --- | --- | 10.50 | 10.12 | --- |
| 18 | | | | --- | --- | --- | --- | --- | 10.09 | --- | 10.11 | 10.03 |
| 19 | | | | --- | --- | --- | --- | --- | 10.09 | --- | 10.09 | --- |
| 20 | | | | --- | --- | 10.52 | --- | --- | --- | --- | 10.08 | --- |
| 21 | | | | 10.05 | --- | --- | 10.28 | 10.26 | --- | --- | 10.08 | --- |
| 22 | | | | --- | 10.08 | --- | --- | --- | --- | 10.43 | --- | --- |
| 23 | | | | --- | --- | --- | --- | --- | --- | --- | 10.05 | 10.58 |
| 24 | | | | --- | 10.17 | 10.44 | --- | --- | --- | --- | 10.03 | 10.60 |
| 25 | | | | --- | --- | --- | --- | --- | --- | --- | 10.04 | 10.90 |
| 26 | | | | 10.05 | --- | --- | --- | --- | 10.08 | --- | 10.11 | 11.02 |
| 27 | | | | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | | | | --- | --- | --- | 10.20 | 10.24 | --- | --- | 10.06 | --- |
| 29 | | | | --- | --- | --- | --- | --- | --- | --- | 10.04 | 11.05 |
| 30 | | | | --- | --- | --- | --- | --- | --- | 10.23 | 10.02 | --- |
| 31 | | | | --- | --- | 10.40 | --- | --- | --- | --- | 10.02 | --- |

## 423246088175800 POWERS LAKE AT POWERS LAKE, WI--CONTINUED

## WATER-QUALITY RECORDS

LOCATION.--Lat 42°32'46", long 88°17'58", in NW 1/4 SE 1/4 sec.13, T.1 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at Powers Lake.

DRAINAGE AREA.--3.42 mi$^2$.

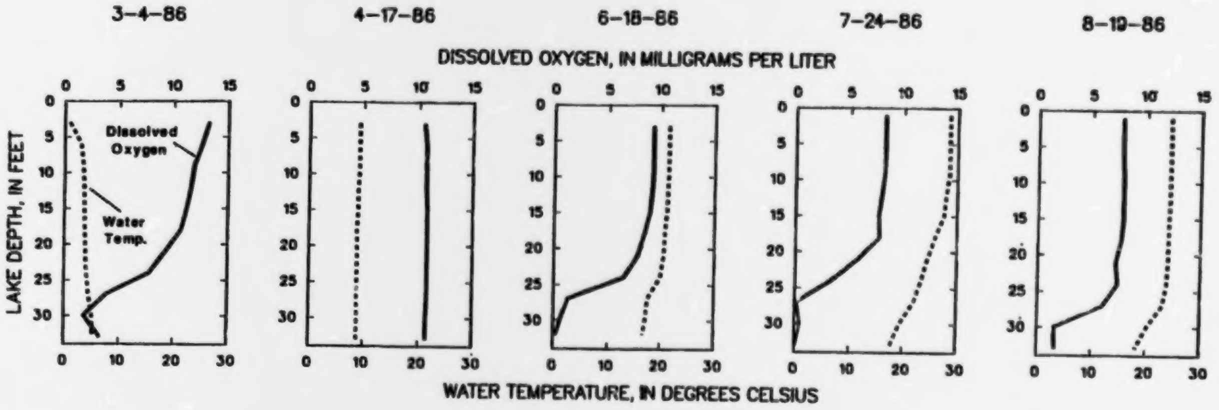
PERIOD OF RECORD.--March 4 to August 19, 1986

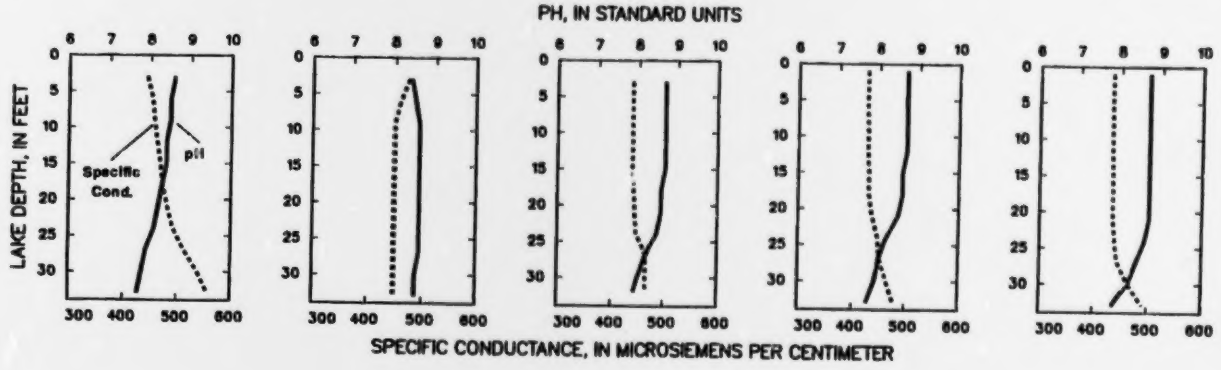
REMARKS.--Lake sampled near center at a depth of 33 ft.

### WATER-QUALITY DATA, MARCH 4 TO AUGUST 19, 1986
(Milligrams per liter unless otherwise indicated)

| | Mar. 4 | | Apr. 17 | | June 18 | | July 24 | | Aug. 19 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth of sample (ft) | 3.0 | 33.0 | 3.0 | 31.5 | 3.0 | 32.0 | 3.0 | 32.5 | 3.0 | 33.5 |
| Specific conductance (uS) | 444 | 558 | 476 | 450 | 439 | 466 | 428 | 480 | 435 | 492 |
| pH | 8.6 | 7.7 | 8.4 | 8.5 | 8.7 | 7.9 | 8.7 | 7.7 | 8.7 | 7.8 |
| Water temperature (°C) | 1.0 | 5.5 | 9.5 | 9.0 | 21.5 | 17.0 | 28.5 | 18.0 | 24.5 | 18.0 |
| Color (Pt-Co. scale) | -- | -- | 5 | 5 | -- | -- | -- | -- | -- | -- |
| Turbidity (NTU) | -- | -- | 2.1 | 10 | -- | -- | -- | -- | -- | -- |
| Secchi-disc (meters) | -- -- -- | | -- 5.0 -- | | -- 3.2 -- | | -- 2.6 -- | | -- 2.0 -- | |
| Dissolved oxygen | 13.2 | 3.3 | 10.5 | 10.7 | 9.3 | 0.2 | 8.3 | 0.0 | 7.8 | 1.7 |
| Hardness, as $CaCO_3$ | -- | -- | 220 | 220 | -- | -- | -- | -- | -- | -- |
| Calcium, dissolved (Ca) | -- | -- | 37 | 37 | -- | -- | -- | -- | -- | -- |
| Magnesium, dissolved (Mg) | -- | -- | 30 | 30 | -- | -- | -- | -- | -- | -- |
| Sodium, dissolved (Na) | -- | -- | 10 | 10 | -- | -- | -- | -- | -- | -- |
| Potassium, dissolved (K) | -- | -- | 2.3 | 2.3 | -- | -- | -- | -- | -- | -- |
| Alkalinity as $CaCO_3$ | -- | -- | 179 | 152 | -- | -- | -- | -- | -- | -- |
| Sulfate, dissolved ($SO_4$) | -- | -- | 27 | 32 | -- | -- | -- | -- | -- | -- |
| Chloride, dissolved (Cl) | -- | -- | 22 | 22 | -- | -- | -- | -- | -- | -- |
| Silica, dissolved ($SiO_2$) | -- | -- | 9.5 | 9.4 | -- | -- | -- | -- | -- | -- |
| Solids, dissolved, at 180 C | -- | -- | 255 | 250 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrate, total (as N) | -- | -- | .995 | .045 | -- | -- | -- | -- | -- | -- |
| Nitrogen, nitrite, total (as N) | -- | -- | <.010 | <.010 | -- | -- | -- | -- | -- | -- |
| Nitrogen, ammonia, total (as N) | -- | -- | .020 | .020 | -- | -- | -- | -- | -- | -- |
| Nitrogen, organic, total (as N) | -- | -- | .38 | .58 | -- | -- | -- | -- | -- | -- |
| Nitrogen, total (as N) | -- | -- | 1.40 | -- | -- | -- | -- | -- | -- | -- |
| Total phosphorus (as P) | -- | -- | .007 | .011 | .009 | .010 | .006 | .037 | .018 | .022 |
| Phosphorus, ortho, diss (as P) | -- | -- | .003 | .004 | -- | .004 | .003 | .002 | .006 | .008 |
| Iron, dissolved (Fe) ug/L | -- | -- | 10 | 6 | -- | -- | -- | -- | -- | -- |
| Manganese, dissolved (Mn) ug/L | -- | -- | <1 | <1 | -- | -- | -- | -- | -- | -- |
| Chlorophyll a, phyto. (ug/L) | -- | -- | 5[1/] | -- | 3 | -- | 4 | -- | 6 | -- |

[1/] Adjusted from 3 ug/L by the Wisconsin State Laboratory of Hygiene.





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## CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual minimum has been determined.

### ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| | | | | | ANNUAL MAXIMUM | | |
|---|---|---|---|---|---|---|---|
| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA ($MI^2$) | PERIOD OF RECORD | DATE | GAGE HEIGHT (FT) | DISCHARGE ($FT^3/S$) |
| STREAMS TRIBUTARY TO LAKE SUPERIOR | | | | | | | |
| 04024400 | STONY BROOK NEAR SUPERIOR, WIS. | LAT 46°35'01", LONG 92°07'10", IN SE 1/4 SEC.4, T.47 N., R.14 W., DOUGLAS COUNTY, AT BOX CULVERT ON STATE HIGHWAY 35, 12.5 MI SOUTH OF TOLL BRIDGE ON U.S. HIGHWAYS 2 AND 35 AT ST. LOUIS RIVER AT SUPERIOR. | 2.20 | 1959-86 | 08-07-86 | 16.03 | 240 |
| 04025200 | PEARSON CREEK NEAR MAPLE, WIS. | LAT 46°38'51", LONG 91°42'55", ON COMMON BOUNDARY OF SECS.11 AND 14, T.48 N., R.11 W., DOUGLAS COUNTY, AT BOX CULVERT ON STATE HIGHWAY 13, 4.0 MI NORTH OF MAPLE. | 4.01 | 1957-86 | 09-19-86 | 12.31 | 230 |
| 04026200 | SAND RIVER TRIBUTARY NEAR RED CLIFF, WIS. | LAT 46°53'53", LONG 90°56'47", IN NE 1/4 SEC.14, T.51 N., R.5 W., BAYFIELD COUNTY, AT BOX CULVERT ON STATE HIGHWAY 13, 8.0 MI NORTHWEST OF RED CLIFF. | 1.14 | 1959-86 | 03-31-86 | 12.72 | 223 |
| *04026300 | SIOUX RIVER NEAR WASHBURN, WIS. | LAT 46°41'20", LONG 90°57'02", IN NE 1/4 SEC.35, T.49 N., R.5 W., BAYFIELD COUNTY, ON COUNTY TRUNK HIGHWAY C, 2.5 MI WEST OF WASHBURN. | 35.2 | 1959-65<br>1966#<br>1967-86 | 06-12-86 | 10.79 | 225 |
| 04026450 | BAD RIVER NEAR MELLEN, WIS. | LAT 46°16'14", LONG 90°42'26", IN NE 1/4 NW 1/4 SEC.26, T.44 N., R.3 W., ASHLAND COUNTY, ON LEFT BANK 150 FT DOWNSTREAM FROM BRIDGE ON U.S. FOREST SERVICE ROAD, 4.4 MI SOUTHEAST OF MELLEN. | 83.4 | 1971-75#<br>1976-86 | 03-31-86 | 4.52 | 717 |
| *04027200 | PEARL CREEK AT GRANDVIEW, WIS. | LAT 46°22'05", LONG 91°05'27", IN NE 1/4 SEC.22, T.45 N., R.6 W., BAYFIELD COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 63, 0.8 MI EAST OF GRANDVIEW. | 16.9 | 1960-86 | 03-31-86 | 14.75 | 320 |
| STREAMS TRIBUTARY TO LAKE MICHIGAN | | | | | | | |
| *04059900 | ALLEN CREEK TRIBUTARY NEAR ALVIN, WIS. | LAT 45°58'05", LONG 88°47'24", ON NORTH BOUNDARY SEC.7, T.40 N., R.14 E., FOREST COUNTY, AT CULVERT ON STATE HIGHWAY 70, 2.2 MI SOUTHEAST OF ALVIN. | 1.24 | 1960-86 | 06-12-86 | 10.69 | 12 |
| 04063640 | NORTH BRANCH PINE RIVER AT WINDSOR DAM NEAR ALVIN, WIS. | LAT 45°55'43", LONG 88°51'38", IN SE 1/4 SEC.21, T.40 N., R.13 E., FOREST COUNTY, AT BRIDGE ON COUNTRY ROAD, AT WINDSOR DAM, 3.8 MI UPSTREAM FROM CONFLUENCE OF NORTH AND SOUTH FORKS, 4.0 MI SOUTHWEST OF ALVIN. | 27.8 | 1967-68#<br>1970-86 | 03-31-86 | 2.58 | 70 |
| 04063688 | SOUTH BRANCH POPPLE RIVER NEAR NEWALD, WIS. | LAT 45°44'42", LONG 88°35'31", IN NW 1/4 SEC.26, T.38 N., R.15 E., FLORENCE COUNTY, AT CORRUGATED TWIN BARREL CULVERTS ON U.S. FOREST SERVICE ROAD 2159, 5.4 MI EAST OF NEWALD. | 9.47 | 1970-86 | 03-31-86 | 12.04 | 52 |
| *04063800 | WOODS CREEK NEAR FENCE, WIS. | LAT 45°49'53", LONG 88°23'17", IN SE 1/4 SEC.29, T.39 N., R.17 E., FLORENCE COUNTY, AT BOX CULVERT ON STATE HIGHWAY 101, 6.0 MI NORTH OF FENCE. | 41.40 | 1958-86 | 03-30-86 | 11.82 | 310 |
| 04064800 | LITTLE POPPLE RIVER NEAR AURORA, WIS. | LAT 45°47'34", LONG 88°11'40", IN SW 1/4 SEC.1, T.38 N., R.18 E., FLORENCE COUNTY, AT 3-BARREL CORRUGATED CULVERT ON COUNTY TRUNK HIGHWAY N, 5.5 MI WEST OF AURORA. | 35.0 | 1970-86 | 03-30-86 | 15.57 | 650 |
| 04067760 | PESHTIGO RIVER NEAR CAVOUR, WIS. | LAT 45°39'20", LONG 88°38'52", IN SW 1/4 SEC.29, T.37 N., R.15 E., FOREST COUNTY, AT BRIDGE ON U.S. HIGHWAY 8, 0.7 MI NORTHWEST OF CAVOUR. | 150 | 1970-86 | 03-30-86 | 14.68 | 1,330 |

## ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| | | | | | ANNUAL MAXIMUM | | |
|---|---|---|---|---|---|---|---|
| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA (MI$^2$) | PERIOD OF RECORD | DATE | GAGE HEIGHT (FT) | DIS-CHARGE (FT$^3$/S) |
| | | STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED | | | | | |
| 04067800 | ARMSTRONG CREEK NEAR ARMSTRONG CREEK, WIS. | LAT 45°39'29", LONG 88°28'44", IN W 1/2 SEC.27, T.37 N., R.16 E., FOREST COUNTY, AT BRIDGE ON U.S. HIGHWAY 8, 1.8 MI NORTHWEST OF ARMSTRONG CREEK. | 23.2 | 1958-86 | 03-30-86 | 10.62 | 152 |
| 04069700 | NORTH BRANCH OCONTO RIVER NEAR WABENO, WIS. | LAT 45°26'19", LONG 88°37'40", IN SW 1/4 SEC.9, T.34 N., R.15 E., FOREST COUNTY, AT PIPE ARCH CULVERT ON COUNTY TRUNK HIGHWAY C, 0.6 MI EAST OF INTERSECTION WITH STATE HIGHWAY 32 AT WABENO. | 34.1 | 1970-86 | 03-30-86 | 12.18 | 178 |
| 04071700 | NORTH BRANCH LITTLE RIVER NEAR COLEMAN, WIS. | LAT 45°00'37", LONG 88°02'43", ON COMMON BOUNDARY OF SECS.2 AND 3, T.29 N., R.20 E., OCONTO COUNTY, AT BRIDGE ON U.S. HIGHWAY 141, 3.8 MI SOUTH OF COLEMAN. | 21.4 | 1958-86 | 03-25-86 | 13.57 | 390 |
| *04071800 | PENSAUKEE RIVER NEAR PULASKI, WIS. | LAT 44°45'48", LONG 88°15'07", IN NE 1/4 SEC.1, T.26 N., R.18 E., SHAWANO COUNTY, AT BRIDGE ON STATE HIGHWAY 32, 6.1 MI NORTH OF PULASKI. | 41.80 | 1961-86 | 11-02-85 | 15.83 | 1,300 |
| *04073400 | BIRD CREEK AT WAUTOMA, WIS. | LAT 44°06'00", LONG 89°18'00", IN S 1/2 SEC.34, T.19 N., R.10 E., WAUSHARA COUNTY, AT CONCRETE CULVERT ON STATE HIGHWAY 21, 0.2 MI WEST OF WAUTOMA. | 3.59 | 1959-86 | 09-22-86 | 12.58 | 140 |
| 04074300 | MUD CREEK NEAR NASHVILLE, WIS. | LAT 45°34'19", LONG 89°02'39", IN SW 1/4 SEC.30, T.36 N., R.12 E., FOREST COUNTY, AT CONCRETE CIRCULAR CULVERT ON U.S. HIGHWAY 8, 3.5 MI NORTH OF NASHVILLE. | 10.0 | 1970-86 | 12-01-85 | 13.30 | 78 |
| *04074700 | HUNTING RIVER NEAR ELCHO, WIS. | LAT 45°25'10", LONG 89°11'15", IN N 1/2 SEC.24, T.34 N., R.10 E., LANGLADE COUNTY, AT TWIN CULVERTS ON U.S. HIGHWAY 45 AND STATE HIGHWAY 47, 1.5 MI SOUTH OF ELCHO. | 9.00 | 1958-86 | 09-27-86 | 12.67 | 155 |
| *04074850 | LILY RIVER NEAR LILY, WIS. | LAT 45°20'59", LONG 88°49'52", IN SE 1/4 SEC.11, T.33 N., R.13 E., LANGLADE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY A, 3.2 MI NORTH FROM JUNCTION OF STATE HIGHWAYS 55 AND 52 AT LILY. | 52.4 | 1970-86 | 03-19-86 | 9.86 | 43 |
| *04075200 | EVERGREEN CREEK NEAR LANGLADE, WIS. | LAT 45°10'11", LONG 88°48'12", IN NW 1/4 SEC.18, T.31 N., R.14 E., LANGLADE COUNTY, AT CULVERT ON STATE HIGHWAY 64, 3.5 MI SOUTHWEST OF LANGLADE. | 8.00 | 1959-65<br>1966-72#<br>1973-86 | 11-02-85 | 11.0 | 51 |
| *04079700 | SPAULDING CREEK NEAR BIG FALLS, WIS. | LAT 44°38'13", LONG 89°01'20", ON COMMON BOUNDARY OF SECS.14 AND 15, T.25 N., R.12 E., WAUPACA COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY E, 1.5 MI NORTH OF BIG FALLS. | 4.90 | 1959-65<br>1966#<br>1967-86 | 09-12-86 | 10.99 | 56 |
| 04081900 | SAWYER CREEK AT OSHKOSH, WIS. | LAT 44°02'00", LONG 88°35'00", IN SW 1/4 SEC.15, T.18 N., R.16 E., WINNEBAGO COUNTY, AT BRIDGE ON U.S. HIGHWAY 41, 1.0 MI SOUTHWEST OF BRIDGE ON ALGOMA STREET AT FOX RIVER, AT OSHKOSH. | 15.3 | 1961-86 | 09-11-86 | 17.47 | 2,080 |
| *04085030 | APPLE CREEK NEAR KAUKAUNA, WIS. | LAT 44°19'15", LONG 88°17'33", ON WEST BOUNDARY SEC.2, T.21 N., R.18 E., OUTAGAMIE COUNTY, AT BRIDGE ON STATE HIGHWAY 55, 3.0 MI NORTH OF KAUKAUNA. | 15.0 | 1960-86 | 03-23-86 | 14.91 | 1,250 |
| 04085300 | NESHOTA RIVER TRIBUTARY NEAR DENMARK, WIS. | LAT 44°23'43", LONG 87°52'13", IN NE 1/4 SEC.7, T.22 N., R.22 E., BROWN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 141, 3.8 MI NORTHWEST OF DENMARK. | 3.08 | 1959-86 | 03-24-86 | 14.74 | 560 |
| *04085400 | KILLSNAKE RIVER NEAR CHILTON, WIS. | LAT 44°03'33", LONG 88°08'36", IN E 1/2 SEC.6, T.18 N., R.20 E., CALUMET COUNTY, AT BRIDGE ON COUNTRY ROAD, 2.4 MI NORTHEAST OF CHILTON. | 29.5 | 1961-86 | 09-11-86 | 13.49 | 1,380 |
| *04087050 | LITTLE MENOMONEE RIVER NEAR FREISTADT, WIS. | LAT 43°12'24", LONG 88°02'24", ON COMMON BOUNDARY OF SECS.29 AND 32, T.9 N., R.21 E., OZAUKEE COUNTY, AT BRIDGE ON DONGES BAY ROAD, 2.0 MI SOUTH OF FREISTADT. | 8.00 | 1958-86 | 09-11-86 | 13.28 | 360 |

## ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| | | | | | ANNUAL MAXIMUM | | |
|---|---|---|---|---|---|---|---|
| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA ($MI^2$) | PERIOD OF RECORD | DATE | GAGE HEIGHT (FT) | DIS-CHARGE ($FT^3/S$) |
| | | STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED | | | | | |
| 04087100 | HONEY CREEK AT MILWAUKEE, WIS. | LAT 42°58'41", LONG 87°59'52", IN SE 1/4 SEC.15, T.6 N., R.21 E., MILWAUKEE COUNTY, 400 FT UPSTREAM FROM BRIDGE ON S. 68TH STREET, 6.0 MI SOUTHWEST OF MOUTH OF MILWAUKEE RIVER, AT MILWAUKEE. | 3.26 | 1959-86 | 06-27-86 | 21.47 | 660 |
| *04087200 | OAK CREEK NEAR SOUTH MILWAUKEE, WIS. | LAT 42°52'58", LONG 87°53'31", ON COMMON BOUNDARY OF SECS.21 AND 22, T.5 N., R.22 E., MILWAUKEE COUNTY, AT BRIDGE ON WEST NICHOLSON ROAD, 3.0 MI SOUTHWEST OF SOUTH MILWAUKEE. | 13.8 | 1958-86 | 03-05-86 | 16.12 | 410 |
| 04087230 | WEST BRANCH ROOT RIVER CANAL TRIBUTARY NEAR NORTH CAPE, WIS. | LAT 42°45'44", LONG 88°01'04", IN SE 1/4 SEC.33, T.4 N., R.21 E., RACINE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY U, 3.0 MI SOUTHEAST OF NORTH CAPE. | 3.92 | 1962-86 | 09-11-86 | 12.68 | 168 |
| *04087250 | PIKE CREEK NEAR KENOSHA, WIS. | LAT 42°36'12", LONG 87°53'41", IN W 1/2 SEC.27, T.2 N., R.22 E., KENOSHA COUNTY, AT BOX CULVERT ON STATE HIGHWAY 43, 3.0 MI NORTHWEST OF KENOSHA. | 7.25 | 1960-86 | 09-11-86 | 16.82 | 170 |
| | | ST. CROIX RIVER BASIN | | | | | |
| *05333100 | LITTLE FROG CREEK NEAR MINONG, WIS. | LAT 46°05'48", LONG 91°46'39", IN NW 1/4 SEC.29, T.42 N., R.11 W., WASHBURN COUNTY, AT CULVERT ON COUNTRY ROAD, 2.5 MI EAST OF MINONG. | 13.0 | 1961-86 | 03-31-86 | 16.08 | 515 |
| *05335380 | BASHAW BROOK NEAR SHELL LAKE, WIS. | LAT 45°47'02", LONG 92°07'51", IN SW 1/4 SEC.8, T.38 N., R.14 W., BURNETT COUNTY, AT TWIN BOX CULVERTS ON COUNTRY ROAD, 10.5 MI NORTHWEST OF SHELL LAKE. | 24.9 | 1959-65<br>1966#<br>1967-86 | 03-31-86 | 13.63 | 225 |
| *05340300 | TRADE RIVER NEAR FREDERIC, WIS. | LAT 45°37'41", LONG 92°29'19", IN SW 1/4 SEC.4, T.36 N., R.17 W., POLK COUNTY, AT BOX CULVERT ON STATE HIGHWAYS 35 AND 48, 2.5 MI SOUTHWEST OF FREDERIC. | 6.34 | 1958-86 | 03-30-86 D | 14.18 | 220 |
| 05341900 | KINNICKINNIC RIVER TRIBUTARY AT RIVER FALLS, WIS. | LAT 44°49'57", LONG 92°38'23", IN NE 1/4 SEC.14, T.27 N., R.19 W., PIERCE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY FF, 1.6 MI SOUTHWEST OF RIVER FALLS. | 7.26 | 1959-86 | 09-09-86 | 13.82 | 1,900 |
| | | CHIPPEWA RIVER BASIN | | | | | |
| 05357360 | BEAR RIVER NEAR POWELL, WIS. | LAT 46°04'40", LONG 90°00'52", IN NE 1/4 SEC.32, T.42 N., R.4 E., IRON COUNTY, AT BRIDGE ON STATE HIGHWAY 182, 3.0 MI WEST OF POWELL. | 118 | 1970-86 | 04-01-86 | 12.67 | 565 |
| 05357390 | WEBER CREEK NEAR MERCER, WIS. | LAT 46°11'16", LONG 90°07'57", IN SE 1/4 SEC.21, T.43 N., R.3 E., IRON COUNTY, AT CULVERT ON U.S. HIGHWAY 51, 3.7 MI NORTHEAST OF MERCER. | 5.86 | 1970-86 | 04-01-86 | 11.76 | 123 |
| 05358100 | SMITH CREEK NEAR PARK FALLS, WIS. | LAT 45°57'06", LONG 90°28'07", IN NE 1/4 SEC.15, T.40 N., R.1 W., PRICE COUNTY, AT CULVERT ON STATE HIGHWAY 13, 1.5 MI NORTHWEST OF PARK FALLS. | 9.11 | 1970-86 | 04-01-86 | 13.75 | 278 |
| *05359600 | PRICE CREEK NEAR PHILLIPS, WIS. | LAT 45°43'33", LONG 90°40'12", IN SW 1/4 SEC.31, T.38 N., R.2 W., PRICE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY W, 13.0 MI WEST OF PHILLIPS. | 16.9 | 1958-65<br>1966#<br>1967-86 | 03-31-86 | 13.98 | 245 |
| *05361400 | HAY CREEK NEAR PRENTICE, WIS. | LAT 45°32'32", LONG 90°21'37", IN SE 1/4 SEC.4, T.35 N., R.1 E., PRICE COUNTY, AT CULVERT ON U.S. HIGHWAY 8, 3.5 MI WEST OF PRENTICE. | 21.9 | 1961-86 | 03-31-86 | 14.47 | 1,090 |
| 05361420 | DOUGLAS CREEK NEAR PRENTICE, WIS. | LAT 45°31'06", LONG 90°15'28", IN NE 1/4 SEC.17, T.35 N., R.2 E., PRICE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY C, 2.3 MI SOUTHEAST OF INTERSECTION WITH STATE HIGHWAY 13 AT PRENTICE. | 24.6 | 1970-86 | 09-27-86 | 14.21 | 745 |

## ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA (MI$^2$) | PERIOD OF RECORD | ANNUAL MAXIMUM | | |
|---|---|---|---|---|---|---|---|
| | | | | | DATE | GAGE HEIGHT (FT) | DIS-CHARGE (FT$^3$/S) |
| | | CHIPPEWA RIVER BASIN--CONTINUED | | | | | |
| 05361600 | NORTH FORK JUMP RIVER NEAR PHILLIPS, WIS. | LAT 45°37'45", LONG 90°23'32", IN SW 1/4 SEC.5, T.36 N., R.1 E., PRICE COUNTY, AT CULVERT ON STATE HIGHWAY 13, 4.0 MI SOUTH OF PHILLIPS. | 10.4 | 1970-86 | 03-31-86 | 12.01 | 137 |
| *05364000 | YELLOW RIVER AT CADOTT, WIS. | LAT 44°57'21", LONG 91°08'48", IN NE 1/4 SEC.31, T 29 N., R.6 W., CHIPPEWA COUNTY, AT BRIDGE ON STATE HIGHWAY 27, AT CADOTT. | 351 | 1943-61#<br>1962-86 | 07-27-86 | 15.82 | 16,600 |
| 05364100 | SETH CREEK NEAR CADOTT, WIS. | LAT 44°59'24", LONG 91°08'48", IN SW 1/4 SEC.17, T.29 N., R.6 W., CHIPPEWA COUNTY, AT CULVERT ON STATE HIGHWAY 27, 3.1 MI NORTH OF CADOTT. | 3.04 | 1962-86 | 09-22-86 | 18.00 | 785 |
| 05364500 | DUNCAN CREEK AT BLOOMER, WIS. | LAT 45°07'00", LONG 91°30'00", IN SEC.8, T.30 N., R.9 W., CHIPPEWA COUNTY, 0.2 MI BELOW BLOOMER DAM, AT BLOOMER. | 49.2 | 1945-51#<br>1958-86 | 09-22-86 | 8.04 | 1,230 |
| *05365700 | GOGGLE-EYE CREEK NEAR THORP, WIS. | LAT 44°58'40", LONG 90°48'00", ON WEST BOUNDARY SEC.19, T.29 N., R.3 W., CLARK COUNTY, AT CULVERT ON STATE HIGHWAY 73, 1.3 MI NORTH OF THORP. | 6.70 | 1958-86 | 09-22-86 | 17.89 | 1,660 |
| *05366500 | EAU CLAIRE RIVER NEAR FALL CREEK, WIS. | LAT 44°48'35", LONG 91°16'50", IN NW 1/4 SEC.19, T 27 N., R.7 W., EAU CLAIRE COUNTY, 500 FT EAST OF COUNTY TRUNK HIGHWAY K, 3.2 MI NORTH OF FALL CREEK. | 758 | 1943-55#<br>1958-86 | 09-21-86 | 17.77 | 20,800 |
| 05367030 | WILLOW CREEK NEAR EAU CLAIRE, WIS. | LAT 44°44'11", LONG 91°26'48", ON COMMON BOUNDARY OF SECS.14 AND 15, T.26 N., R.9 W., EAU CLAIRE COUNTY, AT BOX CULVERT ON STATE HIGHWAY 93, 4.0 MI SOUTH OF EAU CLAIRE. | 4.38 | 1958-86 | 09-22-86 | 13.37 | 325 |
| *05367480 | EAST BRANCH PINE CREEK TRIBUTARY NEAR DALLAS, WIS. | LAT 45°16'50", LONG 91°48'30", IN SW 1/4 SEC.1, T.32 N., R.12 W., BARRON COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY O, 1.5 MI NORTH OF DALLAS. | 3.85 | 1960-86 | 09-18-86 | 13.35 | 203 |
| 05367700 | LIGHTNING CREEK AT ALMENA, WIS. | LAT 45°25'17", LONG 92°01'57", IN NW 1/4 SEC.19, T.34 N., R.13 W., BARRON COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY P, AT ALMENA. | 19.8 | 1958-86 | 03-28-86 | 11.34 | 630 |
| 05370600 | ARKANSAW CREEK TRIBUTARY NEAR ARKANSAW, WIS. | LAT 44°38'31", LONG 92°03'09", IN SW 1/4 SEC.14, T.25 N., R.14 W., PEPIN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 10, 1.2 MI NORTHWEST OF ARKANSAW. | 2.56 | 1959-86 | 09-22-86 | 12.72 | 250 |
| *05370900 | SPRING CREEK NEAR DURAND, WIS. | LAT 44°34'13", LONG 91°57'48", IN S 1/2 SEC.9, T.24 N., R.13 W., BUFFALO COUNTY, AT BRIDGE ON COUNTRY ROAD, 4.0 MI SOUTH OF BRIDGE ON CHIPPEWA RIVER AT DURAND. | 6.49 | 1962-86 | 06-22-86 | 13.54 | 355 |
| | | BUFFALO RIVER BASIN | | | | | |
| 05371800 | BUFFALO RIVER TRIBUTARY NEAR OSSEO, WIS. | LAT 44°35'01", LONG 91°05'40", IN S 1/2 SEC.3, T.24 N., R.6 W., JACKSON COUNTY, AT CULVERT ON U.S. HIGHWAY 10, 6.5 MI EAST OF OSSEO. | 1.44 | 1960-86 | 09-22-86 | 11.87 | 106 |
| 05371920 | BUFFALO RIVER NEAR MONDOVI, WIS. | LAT 44°31'36", LONG 91°41'46", IN SW 1/4 SE 1/4 SEC.27, T.24 N., R.11 W., BUFFALO COUNTY, AT BRIDGE ON STATE HIGHWAY 88, 4.0 MI SOUTH OF MONDOVI. | 280 | 1974-86 | 09-22-86 | 12.96 | 1,380 |
| | | WAUMANDEE CREEK BASIN | | | | | |
| *05378200 | EAGLE CREEK NEAR FOUNTAIN CITY, WIS. | LAT 44°09'49", LONG 91°42'28", IN SW 1/4 SEC.33, T.20 N., R.11 W., BUFFALO COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY G, 2.5 MI NORTH OF FOUNTAIN CITY. | 26.8 | 1961-86 | 07-05-86 | 15.65 | 1,460 |

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA ($MI^2$) | PERIOD OF RECORD | ANNUAL MAXIMUM DATE | ANNUAL MAXIMUM GAGE HEIGHT (FT) | ANNUAL MAXIMUM DISCHARGE ($FT^3/S$) |
|---|---|---|---|---|---|---|---|
| | | BLACK RIVER BASIN | | | | | |
| 05380800 | BLACK RIVER TRIBUTARY NEAR WHITTLESEY, WIS. | LAT 45°12'34", LONG 90°19'05", IN SW 1/4 SEC.35, T.32 N., R.1 E., TAYLOR COUNTY, AT BRIDGE ON STATE HIGHWAY 13, 1.1 MI SOUTH OF WHITTLESEY. | 2.12 | 1960-86 | 04-01-86 | 11.54 | 120 |
| *05380900 | POPLAR RIVER NEAR OWEN, WIS. | LAT 44°53'10", LONG 90°34'17", IN NW 1/4 SEC.25, T.28 N., R.2 W., CLARK COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY N, 4.2 MI SOUTH OF OWEN. | 157 | 1958-65<br>1966#<br>1967-86 | 09-22-86 | 19.32 | 10,500 |
| *05380970 | CAWLEY CREEK NEAR NEILLSVILLE, WIS. | LAT 44°36'42", LONG 90°34'31", IN SW 1/4 SEC.25, T.25 N., R.2 W., CLARK COUNTY, AT BRIDGE ON STATE HIGHWAY 73, 3.7 MI NORTH OF NEILLSVILLE. | 38.6 | 1961-86 | 09-22-86 | 20.62 | 7,880 |
| *05382200 | FRENCH CREEK NEAR ETTRICK, WIS. | LAT 44°11'04", LONG 91°18'49", IN NE 1/4 SEC.27, T.20 N., R.8 W., TREMPEALEAU COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAYS D AND T, 2.5 MI WEST OF ETTRICK. | 14.3 | 1960-86 | 09-22-86 | 11.34 | 490 |
| | | MORMON CREEK BASIN | | | | | |
| *05386300 | MORMON CREEK NEAR LA CROSSE, WIS. | LAT 43°46'00", LONG 91°08'27", IN NE 1/4 SEC.19, T.15 N., R.6 W., LA CROSSE COUNTY, AT BRIDGE ON COUNTRY ROAD, 6.0 MI SOUTHEAST OF LA CROSSE. | 25.5 | 1961-86 | 09-10-86 | 7.11 | 90 |
| | | BAD AXE RIVER BASIN | | | | | |
| *05387100 | NORTH FORK BAD AXE RIVER NEAR GENOA, WIS. | LAT 43°33'10", LONG 91°08'58", IN SW 1/4 SEC.36, T.13 N., R.7 W., VERNON COUNTY, AT BRIDGE ON STATE HIGHWAY 56, 4.1 MI SOUTHEAST OF GENOA. | 80.9 | 1959-65<br>1966#<br>1967-86 | 08-26-86 | 12.54 | 710 |
| | | WISCONSIN RIVER BASIN | | | | | |
| *05390140 | MUSKRAT CREEK AT CONOVER, WIS. | LAT 46°03'27", LONG 89°15'24", IN SW 1/4 SEC.4, T.41 N., R.10 E., VILAS COUNTY, AT CORRUGATED CULVERT ON U.S. HIGHWAY 45, 0.1 MI NORTH OF CONOVER. | 10.2 | 1970-86 | 04-03-86 | 12.75 | 96 |
| 05390240 | FOURMILE CREEK NEAR THREE LAKES, WIS. | LAT 45°50'17", LONG 89°04'32", IN NE 1/4 SEC.26, T.39 N., R.11 E., ONEIDA COUNTY, AT 2-BARREL CORRUGATED CULVERT ON FOURMILE CREEK ROAD, 5.5 MI NORTHEAST OF THREE LAKES. | 10.3 | 1970-86 | 07-12-86 | 12.47 | 73 |
| 05391260 | GUDEGAST CREEK NEAR STARKS, WIS. | LAT 45°41'41", LONG 89°15'42", IN NW 1/4 SEC.16, T.37 N., R.10 E., ONEIDA COUNTY, AT CORRUGATED CULVERT ON COUNTRY ROAD, 3.0 MI NORTHWEST OF STARKS. | 14.0 | 1970-86 | 07-12-86 | 12.54 | 91 |
| 05391950 | SQUAW CREEK NEAR HARRISON, WIS. | LAT 45°32'47", LONG 89°29'16", IN SW 1/4 SEC.3, T.35 N., R.8 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY A, 5.0 MI NORTHEAST OF HARRISON. | 3.23 | 1970-86 | 09-22-86 | 11.07 | 26 |
| *05392150 | MISHONAGON CREEK NEAR WOODRUFF, WIS. | LAT 45°54'41", LONG 89°45'30", IN NE 1/4 SEC.32, T.40 N., R.6 E., VILAS COUNTY, AT TWIN CULVERTS ON STATE HIGHWAY 47, 3.0 MI NORTHWEST OF WOODRUFF. | 17.6 | 1958-86 | 09-22-86 | 10.45 | 76 |
| *05392350 | BEARSKIN CREEK NEAR HARSHAW, WIS. | LAT 45°38'43", LONG 89°41'12", IN SW 1/4 SEC.36, T.37 N., R.6 E., ONEIDA COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY K, 2.1 MI SOUTHWEST OF HARSHAW. | 31.1 | 1958-65<br>1966#<br>1967-86 | 09-22-86 | 9.94 | 100 |
| 05393640 | LITTLE PINE CREEK NEAR IRMA, WIS. | LAT 45°23'37", LONG 89°40'20", IN NW 1/4 SEC.31, T.34 N., R.7 E., LINCOLN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 51, 3.0 MI NORTH OF IRMA. | 22.0 | 1970-86 | 03-30-86 | 13.22 | 165 |

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA ($MI^2$) | PERIOD OF RECORD | ANNUAL MAXIMUM DATE | ANNUAL MAXIMUM GAGE HEIGHT (FT) | ANNUAL MAXIMUM DISCHARGE ($FT^3/S$) |
|---|---|---|---|---|---|---|---|
| | | WISCONSIN RIVER BASIN--CONTINUED | | | | | |
| *05394200 | DEVIL CREEK NEAR MERRILL, WIS. | LAT 45°08'56", LONG 89°47'13", IN N 1/2 SEC.30, T.31 N., R.6 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY F, 5.8 MI SOUTHWEST OF MERRILL. | 9.58 | 1961-86 | 03-31-86 | 13.36 | 400 |
| 05395020 | LLOYD CREEK NEAR DOERING, WIS. | LAT 45°13'57", LONG 89°22'04", IN SE 1/4 SEC.21, T.32 N., R.9 E., LANGLADE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY C, 4.5 MI EAST OF DOERING. | 7.80 | 1970-86 | 09-22-86 | 15.23 | 610 |
| 05395100 | TRAPPE RIVER TRIBUTARY NEAR MERRILL, WIS. | LAT 45°08'07", LONG 89°30'08", IN SW 1/4 SEC.28, T.31 N., R.8 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY P, 9.5 MI SOUTHEAST OF MERRILL. | 1.58 | 1959-86 | 07-31-86 | 16.27 | 355 |
| 05396100 | PET BROOK TRIBUTARY NEAR EDGAR, WIS. | LAT 44°56'40", LONG 89°57'05", IN SE 1/4 SEC.31, T.29 N., R.5 E., MARATHON COUNTY, AT CULVERT ON STATE HIGHWAY 29, 1.5 MI NORTHEAST OF EDGAR. | 6.86 | 1962-86 | 03-29-86 | 14.85 | 670 |
| 05396300 | WISCONSIN RIVER TRIBUTARY AT WAUSAU, WI | LAT 44°57'28", LONG 89°39'52", IN NE 1/4 NW 1/4 SEC.34, T.29 N., R.7 E., MARATHON COUNTY, ON ROAD RIGHT-OF-WAY OF 24TH AVENUE OPPOSITE THE ACE MOTEL, 300 FT EAST OF U.S. HIGHWAY 51, AT WAUSAU. | 1.10 | 1982-86 | 09-22-86 | 7.15 | 335 |
| 05397600 | BIG SANDY CREEK NEAR WAUSAU, WIS. | LAT 45°01'55", LONG 89°27'00", IN SE 1/4 SEC.31, T.30 N., R.9 E., MARATHON COUNTY, AT BRIDGE ON STATE HIGHWAY 52, 10.0 MI NORTHEAST OF WAUSAU. | 11.5 | 1959-86 | 03-26-86 | 11.87 | 310 |
| 05400025 | JOHNSON CREEK NEAR KNOWLTON, WIS. | LAT 44°44'19", LONG 89°36'39", IN SE 1/4 NE 1/4 SEC.13, T.26 N., R.7 E., MARATHON COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY X, 2.7 MI EAST OF KNOWLTON. | 25.1 | 1973-86 | 03-26-86<br>08-13-85 | 15.19<br>E 14.35 | 1,150<br>E 700 |
| 05401800 | YELLOW RIVER TRIBUTARY NEAR PITTSVILLE, WIS. | LAT 44°28'58", LONG 90°07'05", ON COMMON BOUNDARY OF SECS.11 AND 14, T.23 N., R.3 E., WOOD COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY C, 2.0 MI NORTH OF PITTSVILLE. | 7.23 | 1959-86 | 09-23-86 | 13.34 | 660 |
| *05403520 | WEBSTER CREEK AT NEW LISBON, WIS. | LAT 43°51'23", LONG 90°10'25", IN NE 1/4 SEC.19, T.16 N., R.3 E., JUNEAU COUNTY, AT BRIDGE ON STATE HIGHWAY 80, 1.2 MI SOUTH OF NEW LISBON. | 11.8 | 1961-86 | 09-23-86 | 13.85 | 285 |
| *05403550 | ONEMILE CREEK NEAR MAUSTON, WIS. | LAT 43°45'50", LONG 90°04'45", IN SE 1/4 SEC.24, T.15 N., R.3 E., JUNEAU COUNTY, AT BRIDGE ON STATE HIGHWAY 58, 2.4 MI SOUTH OF MAUSTON. | 30.2 | 1958-86 | 03-19-86 | 15.41 | 900 |
| 05403630 | HULBERT CREEK NEAR WISCONSIN DELLS, WIS. | LAT 43°37'37", LONG 89°48'36", IN SE 1/4 SW 1/4 SEC.5, T.13 N., R.6 E., SAUK COUNTY, 1.6 MI UPSTREAM FROM MOUTH, AND 2.0 MI WEST OF WISCONSIN DELLS. | 11.2 | 1971-77#<br>1978-86 | 03-19-86 | 3.84 | 110 |
| 05403700 | DELL CREEK NEAR LAKE DELTON, WIS. | LAT 43°33'05", LONG 89°51'55", IN NW 1/4 SEC.2, T.12 N., R.5 E., SAUK COUNTY, ON RIGHT BANK 50 FT UPSTREAM FROM HIGHWAY BRIDGE, 6.0 MI SOUTHWEST OF LAKE DELTON, AND 7.0 MI UPSTREAM FROM MOUTH. | 44.9 | 1957-65#<br>1966-70<br>1971-80#<br>1983-86 | 05-15-86 | 5.62 | 200 |
| *05404200 | NARROWS CREEK AT LOGANVILLE, WIS. | LAT 43°26'32", LONG 90°02'06", IN SE 1/4 SEC.8, T.11 N., R.4 E., SAUK COUNTY, AT BRIDGE ON STATE HIGHWAYS 23 AND 154, 0.2 MI NORTH OF LOGANVILLE. | 40.1 | 1958-65<br>1966#<br>1967-86 | 03-05-86 | 14.76 | 2,220 |
| *05405600 | ROWAN CREEK AT POYNETTE, WIS. | LAT 43°23'13", LONG 89°23'25", IN S 1/2 SEC.35, T.11 N., R.9 E., COLUMBIA COUNTY, AT BRIDGE ON U.S. HIGHWAY 51, AT POYNETTE. | 10.4 | 1961-86 | 09-11-86 | 13.58 | 430 |
| 05406800 | ROCKY BRANCH NEAR RICHLAND CENTER, WIS. | LAT 43°18'52", LONG 90°23'22", IN E 1/2 SEC.29, T.10 N., R.1 E., RICHLAND COUNTY, AT CULVERT ON STATE HIGHWAY 80, 1.5 MI SOUTH OF RICHLAND CENTER. | 1.68 | 1960-86 | 03-05-86<br>06-28-67<br>08-26-72 | 11.00<br>17.20<br>17.40 | 55<br>E 850<br>E 870 |

## ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA ($MI^2$) | PERIOD OF RECORD | ANNUAL MAXIMUM DATE | GAGE HEIGHT (FT) | DISCHARGE ($FT^3$/S) |
|---|---|---|---|---|---|---|---|
| | | WISCONSIN RIVER BASIN--CONTINUED | | | | | |
| *05407100 | RICHLAND CREEK NEAR PLUGTOWN, WIS. | LAT 43°11'12", LONG 90°44'23", IN NW 1/4 SEC.9, T.8 N., R.3 W., CRAWFORD COUNTY, AT BRIDGE ON U.S. HIGHWAY 61, 2.0 MI SOUTH OF PLUGTOWN. | 19.2 | 1958-86 | 03-05-86 | 14.72 | 510 |
| *05407200 | CROOKED CREEK NEAR BOSCOBEL, WIS. | LAT 43°06'27", LONG 90°42'18", IN SE 1/4 SEC.2, T.7 N., R.3 W., GRANT COUNTY, AT BRIDGE ON U.S. HIGHWAY 61, 1.6 MI SOUTH OF BOSCOBEL. | 12.9 | 1959-86 | 1986 | B | <100 |
| | | GRANT RIVER BASIN | | | | | |
| *05413400 | PIGEON CREEK NEAR LANCASTER, WIS. | LAT 42°49'00", LONG 90°43'20", IN SW 1/4 SEC.15, T.4 N., R.3 W., GRANT COUNTY, AT CULVERT ON COUNTRY ROAD, 2.0 MI SOUTH OF LANCASTER. | 6.93 | 1960-65<br>1966#<br>1967-86 | 03-19-86 | 11.45 | 255 |
| | | PLATTE RIVER BASIN | | | | | |
| *05414200 | BEAR BRANCH NEAR PLATTEVILLE, WIS. | LAT 42°45'46", LONG 90°30'06", IN NW 1/4 SEC.4, T.3 N., R.1 W., GRANT COUNTY, AT BOX CULVERT ON STATE HIGHWAY 81, 2.3 MI NORTHWEST OF PLATTEVILLE. | 2.80 | 1958-86 | 03-19-86 | 11.60 | 200 |
| | | GALENA RIVER BASIN | | | | | |
| *05414900 | PATS CREEK NEAR ELK GROVE, WIS. | LAT 42°40'03", LONG 90°22'40", IN SW 1/4 SEC.4, T.2 N., R.1 E., LAFAYETTE COUNTY, AT BRIDGE ON STATE HIGHWAY 81, 7.0 MI SOUTHEAST OF PLATTEVILLE. | 8.49 | 1960-86 | 1986 | B | <200 |
| 05414915 | MADDEN BRANCH NEAR BELMONT, WIS. | LAT 42°40'03", LONG 90°19'45", IN NE 1/4 NE 1/4 SEC.11, T.2 N., R.1 E., LAFAYETTE COUNTY, AT STATE HIGHWAY 81, 4.7 MI SOUTH OF BELMONT. | 2.83 | 1981-82#<br>1984-86 | 1986 | B | <100 |
| | | ROCK RIVER BASIN | | | | | |
| *05423800 | EAST BRANCH ROCK RIVER TRIBUTARY NEAR SLINGER, WIS. | LAT 43°23'06", LONG 88°18'29", IN S 1/2 SEC.26, T.11 N., R.18 E., WASHINGTON COUNTY, AT CULVERT ON U.S. HIGHWAY 41, 4.0 MI NORTHWEST OF SLINGER. | 4.42 | 1960-86 | 09-11-86 | 13.04 | 325 |
| *05425700 | ROBBINS CREEK AT COLUMBUS, WIS. | LAT 43°20'48", LONG 89°01'55", IN SE 1/4 SEC.11, T.10 N., R.12 E., COLUMBIA COUNTY, AT CULVERT ON U.S. HIGHWAY 16, AT COLUMBUS. | 8.01 | 1960-86 | 09-11-86 | 14.04 | 312 |
| 05425827 | MAUNESHA RIVER NEAR SUN PRAIRIE, WIS. | LAT 43°13'37", LONG 89°09'33", IN SE 1/4 SEC.23, T.9 N., R.11 E., DANE COUNTY, AT BRIDGE ON TOWN ROAD, 4.2 MI NORTHEAST OF SUN PRAIRIE. | 26.0 | 1973-86 | 03-03-86 | 12.21 | 425 |
| *05427200 | ALLEN CREEK NEAR FORT ATKINSON, WIS. | LAT 42°53'54", LONG 88°51'35", IN NE 1/4 SEC.17, T.5 N., R.14 E., JEFFERSON COUNTY, AT BOX CULVERT ON STATE HIGHWAY 26, 2.5 MI SOUTHWEST OF FORT ATKINSON. | 10.2 | 1958-86 | 08-26-86 | 9.00 | 15 |
| 05427800 | TOKEN CREEK NEAR MADISON, WIS. | LAT 43°10'52", LONG 89°19'28", IN SW 1/4 SEC.4, T.8 N., R.10 E., DANE COUNTY, AT CULVERT ON U.S. HIGHWAY 51, 8 MI NORTHEAST OF STATE CAPITOL IN MADISON. | 24.3 | 1961-65<br>1966#<br>1967-75<br>1976-81#<br>1982-86 | 03-03-86 | 12.93 | 305 |
| 05430403 | FISHER CREEK TRIBUTARY AT JANESVILLE, WI | LAT 42°40'18", LONG 89°03'31", IN SW 1/4 SE 1/4 SEC.34, T.3 N., R.12 E., ROCK COUNTY, AT CULVERT ON ROCKPORT ROAD, 0.4 MI WEST OF SOUTH CROSBY AVENUE, AND 0.6 MI UPSTREAM FROM COUNTY TRUNK HIGHWAY D, AT JANESVILLE. | 1.95 | 1982-86 | 07-25-86 | 6.47 | 320 |

## ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1986

| STATION NO. | STATION NAME | LOCATION | DRAINAGE AREA (MI$^2$) | PERIOD OF RECORD | ANNUAL MAXIMUM DATE | ANNUAL MAXIMUM GAGE HEIGHT (FT) | ANNUAL MAXIMUM DISCHARGE (FT$^3$/S) |
|---|---|---|---|---|---|---|---|
| ROCK RIVER BASIN--CONTINUED | | | | | | | |
| *05431400 | LITTLE TURTLE CREEK AT ALLENS GROVE, WIS. | LAT 42°34'46", LONG 88°45'33", IN NE 1/4 SEC.6, T.1 N., R.15 E., WALWORTH COUNTY, AT BRIDGE ON COUNTRY ROAD, 0.2 MI SOUTH OF ALLENS GROVE. | 41.8 | 1962-86 | 03-08-86 | 12.80 | 560 |
| *05432300 | ROCK BRANCH NEAR MINERAL POINT, WIS. | LAT 42°50'02", LONG 90°09'15", IN SE 1/4 SEC.8, T.4 N., R.3 E., IOWA COUNTY, AT BOX CULVERT ON STATE HIGHWAY 23, 2.5 MI SOUTH OF MINERAL POINT. | 4.83 | 1959-86 | 1986 | B | <100 |
| *05433500 | YELLOWSTONE RIVER NEAR BLANCHARDVILLE, WIS. | LAT 42°46'55", LONG 89°59'50", IN NE 1/4 SEC.34, T.4 N., R.4 E., LAFAYETTE COUNTY, 0.6 MI UPSTREAM FROM BRIDGE ON COUNTY TRUNK HIGHWAY F, 7.0 MI WEST-SOUTHWEST OF BLANCHARDVILLE. | 28.5 | 1954-65# | 03-16-86 | 4.56 | 275 |
| | | | | 1966-86 | 02-20-55 | 9.50 | E 2,100 |
| | | | | | 06-11-57 | 9.65 | E 2,500 |
| | | | | | 04-01-59 | 10.00 | E 3,100 |
| | | | | | 03-29-60 | 10.47 | E 4,500 |
| | | | | | 10-29-61 | 9.13 | E 1,700 |
| | | | | | 03-16-63 | 9.70 | E 2,700 |
| | | | | | 08-20-64 | 9.30 | E 1,900 |
| | | | | | 09-04-65 | 9.64 | E 2,500 |
| | | | | | 02-08-66 | 9.51 | E 2,100 |
| | | | | | 01-24-67 | 10.25 | E 3,600 |
| | | | | | 01-31-68 | 7.69 | E 825 |
| | | | | | 06-26-69 | 9.97 | E 3,050 |
| | | | | | 03-03-70 | 2.99 | E 114 |
| | | | | | 01-10-72 | 9.20 | E 1,750 |
| | | | | | 03-07-73 | 9.51 | E 2,100 |
| | | | | | 03-22-75 | 9.68 | E 2,550 |
| | | | | | 03-12-76 | 9.18 | E 1,750 |
| | | | | | 02-24-77 | 8.29 | E 1,100 |
| | | | | | 07-20-78 | 9.96 | E 3,050 |
| | | | | | 09-08-80 | 9.80 | E 2,600 |
| | | | | | 08-28-81 | 10.45 | E 4,500 |
| | | | | | 08-04-82 | 9.39 | E 2,450 |
| | | | | | 02-16-83 | 7.17 | E 695 |
| | | | | | 02-21-85 | 8.93 | E 1,450 |
| 05435900 | SUGAR RIVER TRIBUTARY NEAR PINE BLUFF, WIS. | LAT 43°02'48", LONG 89°38'42", IN SE 1/4 SEC.27, T.7 N., R.7 E., DANE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY J, 1.1 MI SOUTHEAST OF PINE BLUFF. | 7.42 | 1961-86 | 10-24-85 | 11.79 | 95 |
| *05436200 | GILL CREEK NEAR BROOKLYN, WIS. | LAT 42°49'38", LONG 89°26'43", IN NW 1/4 SEC.16, T.4 N., R.9 E., GREEN COUNTY, AT CULVERT ON STATE HIGHWAY 92, 4.3 MI WEST OF BROOKLYN. | 3.34 | 1961-86 | 09-12-86 | 12.73 | 80 |
| | | | | | 03-31-65 | 15.06 | E 370 |
| | | | | | 06-16-67 | 14.61 | E 260 |
| | | | | | 06-16-81 | 14.31 | E 230 |
| | | | | | 09-09-85 | 13.61 | E 150 |
| *05437200 | EAST FORK RACCOON CREEK TRIBUTARY NEAR BELOIT, WIS. | LAT 42°30'44", LONG 89°06'40", ON COMMON BOUNDARY OF SECS.30 AND 31, T.1 N., R.12 E., ROCK COUNTY, AT CULVERT ON STATE HIGHWAY 81, 2.9 MI WEST OF BELOIT. | 4.64 | 1958-86 | 03-05-86 | 12.42 | 160 |
| ILLINOIS RIVER BASIN | | | | | | | |
| 05545100 | SUGAR CREEK AT ELKHORN, WIS. | LAT 42°41'05", LONG 88°30'50", IN SW 1/4 SEC.29, T.3 N., R.17 E., WALWORTH COUNTY, AT CULVERT ON STATE HIGHWAY 11, 2.0 MI NORTHEAST OF ELKHORN. | 6.68 | 1962-86 | 03-09-86 | 12.70 | 190 |
| 05545200 | WHITE RIVER TRIBUTARY NEAR BURLINGTON, WIS. | LAT 42°41'03", LONG 88°21'37", ON COMMON BOUNDARY OF SECS.27 AND 34, T.3 N., R.18 E., WALWORTH COUNTY, AT BOX CULVERT ON STATE HIGHWAY 11, 4.5 MI WEST OF BURLINGTON. | 2.42 | 1958-86 | 08-07-86 | 12.87 | 185 |
| *05548150 | NORTH BRANCH NIPPERSINK CREEK TRIBUTARY NEAR GENOA CITY, WIS. | LAT 42°30'15", LONG 88°23'01", IN E 1/2 SEC.32, T.1 N., R.18 E., WALWORTH COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY B, 3.0 MI WEST OF GENOA CITY. | 13.8 | 1962-86 | 03-09-86 | 12.97 | 375 |

* Also a low-flow partial-record station.
# Operated as a continuous-record station.
B Peak did not reach bottom of gage.
D Backwater from beaver dam.
E Revised.

## MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

### DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1986

| Stream | Tributary to | Location | Drainage Area ($mi^2$) | Measured Previously (Water Years) | Measurements |  |
|---|---|---|---|---|---|---|
|  |  |  |  |  | Date | Discharge ($ft^3/s$) |
|  |  | STREAMS TRIBUTARY TO LAKE MICHIGAN |  |  |  |  |
| Wolf River | Fox River | Lat 45°07'38", long 88°39'45", in SE 1/4 NE 1/4 sec.31, T.31 N., R.15 E., Langlade County, at CTY "M" bridge. | -- | 1985 | 11-15-85<br>05-27-86 | 835<br>368 |
| Elton Creek | Evergreen Creek | Lat 45°06'08", long 88°49'59", in NE 1/4 NW 1/4 sec.8, T.30 N., R.13 E., Menominee County, at trail crossing. | -- | 1985 | 05-28-86 | 31.3 |
| Evergreen Creek | Wolf River | Lat 45°04'23", long 88°42'30", in NW 1/4 NW 1/4 sec.20, T.30 N., R.15 E., Menominee County, at CTH "WW", 8.2 mi south of Langlade. | 54.6 | 1966<br>1983-85 | 05-29-86 | 75.0 |
| West Branch Wolf River | Wolf River | Lat 45°01'06", long 88°52'27", in SW 1/4 SW 1/4 sec.1, T.29 N., R.13 E., Menominee County, at town road, 3.0 mi northeast of Neopit. | 41.8 | 1982-85 | 05-28-86 | 62.3 |
| Little West Branch Wolf River | West Branch Wolf River | Lat 45°05'02", long 88°58'55", in NE 1/4 NE 1/4 sec.13, T.30 N., R.12 E., Langlade County, at county line between Langlade and Menominee Counties, and 6.2 mi northwest of Zoar. | 9.19 | 1985 | 05-28-86 | 7.83 |
| West Branch Wolf River | Wolf River | Lat 44°58'54", long 88°49'04", in SE 1/4 NE 1/4 sec.20, T.29 N., R.14 E., Menominee County, 0.6 mi downstream from reservoir outlet at Neopit. | 98.6 |  | 05-29-86 | 119 |
|  |  | ST. CROIX RIVER BASIN |  |  |  |  |
| North Fork Wood River | Wood River | Lat 45°48'30", long 92°33'48", in SE 1/4 NW 1/4 sec.2, T.38 N., R.18 W., Burnett County, at CTH "D", 6.2 mi northeast of Grantsburg. | 17.9 | 1985 | 10-14-85<br>01-02-86<br>04-29-86<br>05-29-86<br>06-25-86<br>07-14-86<br>08-27-86<br>09-18-86 | 42.6<br>9.31<br>144<br>10.0<br>7.2<br>7.07<br>14.4<br>20.8 |
| North Fork Wood River | Wood River | Lat 45°48'35", long 92°36'03", in SE 1/4 NW 1/4 sec.4, T.38 N., R.18 W., Burnett County, at CTH "D", 4.4 mi northeast of Grantsburg. | 53.4 | 1985 | 10-14-85<br>01-02-86<br>01-30-86<br>04-29-86<br>05-29-86<br>06-25-86<br>07-14-86<br>08-27-86<br>09-18-86 | 66.7<br>15.0<br>13.6<br>250<br>60.2<br>17.8<br>19.0<br>57.2<br>63.7 |
| Whiskey Creek | Wood River | Lat 45°47'40", long 92°39'09", in NE 1/4 SE 1/4 sec.12, T.38 N., R.19 W., Burnett County, at CTH "D", 1.9 mi northeast of Grantsburg. | -- | 1985 | 10-14-85<br>01-02-86<br>01-30-86<br>04-29-86<br>05-29-86<br>06-25-86<br>07-14-86<br>08-27-86<br>09-18-86 | 25.6<br>1.18<br>0.59<br>33.3<br>59.0<br>42.6<br>18.0<br>14.3<br>14.1 |
| Hay Creek | Wood River | Lat 45°47'34", long 92°41'33", in NW 1/4 SW 1/4 sec.11, T.38 N., R.19 W., Burnett County, at Borg Road, 1.2 mi northwest of Grantsburg. | -- | 1985 | 10-14-85<br>01-02-86<br>04-29-86<br>05-29-86<br>06-25-86<br>07-14-86<br>08-27-86<br>09-18-86 | 17.3<br>4.66<br>47.5<br>36.8<br>12.7<br>11.6<br>16.1<br>22.3 |

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1986

| Stream | Tributary to | Location | Drainage Area (mi$^2$) | Measured Previously (Water Years) | Measurements | |
|---|---|---|---|---|---|---|
| | | | | | Date | Discharge (ft$^3$/s) |
| | | WISCONSIN RIVER BASIN | | | | |
| South Fork Baraboo River | Baraboo River | Lat 43°39'11", long 90°20'07", in NE 1/4 NE 1/4 sec.35, T.14N., R.1 E., Vernon County, at bridge on County Trunk Highway FF, in Hillsboro. | -- | -- | 09-17-86 | 12.8 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°05'15", long 89°34'52", in NW 1/4 NW 1/4 sec.17, T.7 N., R.8 E., Dane County, at bridge on Twin Valley Road, 3.7 mi southeast of Cross Plains. | 3.32 | 1985 | 11-12-85<br>02-19-86<br>05-07-86 | 2.31<br>2.07<br>2.72 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°00'01", long 89°37'32", in SE 1/4 NE 1/4 sec.11, T.7 N., R.7 E., Dane County, on bridge on private road. | -- | 1985 | 12-11-85<br>02-19-86<br>05-07-86 | 3.13<br>2.50<br>3.48 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°05'17", long 89°35'25", in SW 1/4 SE 1/4 sec.7, T.7 N., R.8 E., Dane County, on bridge on Low Road. | -- | 1985 | 12-11-85<br>02-19-86<br>05-07-86 | 2.65<br>2.21<br>3.01 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°00'39", long 89°38'16", in NW 1/4 NW 1/4 sec.11, T.7 N., R.7 E., Dane County. | -- | 1985 | 12-11-85<br>02-19-86<br>05-07-86 | 13.73<br>5.49<br>12.60 |
| Brewery Creek | Black Earth Creek | Lat 43°07'57", long 89°37'00", in NW 1/4 NW 1/4 sec.36, T.7 N., R.7 E., Dane County, at bridge on county road. | -- | 1985 | 12-11-85<br>02-19-86<br>05-07-86 | 1.90<br>3.80<br>5.00 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°01'55", long 89°39'37", in SW 1/4 NW 1/4 sec.3, T.7 N., R.7 E., Dane County, at bridge on CTH "KP" in Cross Plains. | 26.1 | 1972-73<br>1975<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 22.30<br>19.80<br>22.30 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°02'30", long 89°40'12", in NW 1/4 NE 1/4 sec.4, T.7 N., R.7 E., Dane County, on U.S. Highway 14, 0.3 mi west of the sewage disposal plant at Cross Plains. | 26.7 | 1958<br>1964<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 25.00<br>23.00<br>25.60 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°03'17", long 89°40'59", in NE 1/4 NE 1/4 sec.5, T.7 N., R.7 E., Dane County, just upstream from tributary, 2.0 mi west of Cross Plains. | 27.0 | 1964<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 29.00<br>26.40<br>27.60 |
| Black Earth Creek Tributary | Black Earth Creek | Lat 43°07'05", long 89°40'58", in NE 1/4 NE 1/4 sec.5, T.7 N., R.7 E., Dane County, at mouth, 2.2 mi west of Cross Plains. | -- | 1973<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 4.30<br>3.19<br>4.98 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°03'39", long 89°41'24", in NW 1/4 NE 1/4 sec.5, T.7 N., R.7 E., Dane County, at bridge on town road, 2.2 mi west of Cross Plains. | 39.1 | 1958<br>1964<br>1974<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 39.20<br>36.50<br>37.40 |
| Black Earth Creek | Blue Mounds Creek | Lat 43°05'06", long 89°42'36", in NW 1/4 SE 1/4 sec.31, T.8 N., R.7 E., Dane County, at bridge on town road, 2.1 mi southeast of Black Earth. | 40.6 | 1973<br>1985 | 12-11-85<br>02-19-86<br>05-07-86 | 41.00<br>41.40<br>42.30 |
| Black Earth Creek Tributary | Black Earth Creek | Lat 43°07'19", long 89°42'54", in SE 1/4 SW 1/4 sec.31, T.8 N., R.7 E., Dane County, at bridge on CTH "KP". | -- | 1985 | 12-11-85<br>02-19-86<br>05-07-86 | 0.291<br>0.289<br>0.387 |
| Unnamed Tributary to Black Earth Creek | Blue Mounds Creek | Lat 43°07'47", long 89°43'05", in SW 1/4 NW 1/4 sec.31, T.8 N., R.6 E., Dane County, at bridge on U.S. Highway 14. | -- | 1985 | 12-11-85<br>05-07-86 | 0.291<br>0.305 |

Water-quality partial-record stations are particular sites where chemical-quality, biological, physical, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses.

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### STREAMS TRIBUTARY TO LAKE SUPERIOR

04025500 - BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16 LONG 091 35 43)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 09... | 1110 | 246 | 100 | 7.0 | 07... | 1615 | 462 | 90 | 8.0 |
| DEC | | | | | JUN | | | | |
| 04... | 1145 | 160 | 127 | .5 | 02... | 1620 | 178 | 114 | 17.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 09... | 1405 | 138 | 122 | .5 | 29... | 1245 | 196 | 122 | 18.5 |
| MAR | | | | | | | | | |
| 04... | 1515 | 150 | 123 | 4.5 | | | | | |

04027000 - BAD RIVER NEAR ODANAH, WI (LAT 46 29 15 LONG 090 41 45)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 10... | 1430 | 1780 | 65 | 7.5 | 08... | 1130 | 3310 | 80 | 6.5 |
| DEC | | | | | JUN | | | | |
| 19... | 1250 | 354 | 120 | .0 | 03... | 1440 | 169 | 150 | 18.0 |
| MAR , 1986 | | | | | JUL | | | | |
| 07... | 1210 | 221 | 170 | .0 | 28... | 1420 | 1410 | 95 | 20.0 |

04027500 - WHITE RIVER NEAR ASHLAND, WI (LAT 46 29 50 LONG 090 54 15)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 09... | 1735 | 433 | 124 | 8.0 | 08... | 0930 | 684 | 100 | 7.0 |
| DEC | | | | | JUN | | | | |
| 05... | 1015 | 168 | 150 | 1.0 | 04... | 0835 | 187 | 153 | 18.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 09... | 1115 | 185 | 182 | .5 | 29... | 0815 | 475 | 140 | 20.0 |
| MAR | | | | | AUG | | | | |
| 04... | 1700 | 188 | 190 | 1.0 | 13... | 0945 | 335 | 151 | 17.5 |

### STREAMS TRIBUTARY TO LAKE MICHIGAN

04066003 - MENOMINEE RIVER BELOW PEMENE CRK NR PEMBINE, WI (LAT 45 34 46 LONG 087 47 13)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | JUN , 1986 | | | | |
| 02... | 1820 | 6120 | 194 | 11.0 | 24... | 1130 | 1470 | 303 | 18.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 03... | 1535 | 14600 | 188 | 2.0 | 17... | 1230 | 2500 | 273 | 13.0 |

04069500 - PESHTIGO RIVER AT PESHTIGO, WI (LAT 45 02 49 LONG 087 44 40)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|
| OCT , 1985 | | | | |
| 22... | 1550 | 857 | 280 | 9.5 |

04071000 - OCONTO RIVER NEAR GILLETT, WI (LAT 44 51 53 LONG 088 18 00)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 23... | 0905 | 743 | 140 | 8.0 | 01... | 1515 | 2800 | 165 | 2.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 03... | 1145 | 657 | 305 | .0 | 30... | 1000 | 435 | 277 | 23.0 |

04071858 - PENSAUKEE RIVER NEAR PENSAUKEE, WI (LAT 44 49 08 LONG 087 57 12)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | MAR , 1986 | | | | |
| 22... | 1315 | 55 | 450 | 9.0 | 06... | 1440 | 42 | 460 | .0 |
| JAN , 1986 | | | | | | | | | |
| 16... | 1250 | 47 | 440 | .0 | | | | | |

04073500 - FOX RIVER AT BERLIN, WI (LAT 43 57 14 LONG 088 57 08)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUN , 1986 | | | | |
| 15... | 1330 | 2370 | 455 | 2.0 | 06... | 1310 | 929 | 330 | 19.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 09... | 1245 | 1240 | 430 | .0 | 24... | 1645 | 1040 | 355 | 28.0 |
| FEB | | | | | SEP | | | | |
| 13... | 1005 | 1260 | 350 | .0 | 10... | 1100 | 752 | 305 | 16.5 |
| MAR | | | | | | | | | |
| 21... | 1225 | 3410 | 310 | .5 | | | | | |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

04074538 - SWAMP CREEK ABOVE RICE LAKE, AT MOLE LAKE, WI (LAT 45 29 18 LONG 088 57 49)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1620 | 85 | 129 | 7.5 | 11... | 1600 | 65 | 140 | 8.5 |
| 24... | 1045 | 40 | 184 | 9.5 | MAY | | | | |
| NOV | | | | | 04... | 1540 | 16 | 226 | 19.0 |
| 12... | 1350 | 38 | 190 | .5 | 13... | 1155 | 32 | 203 | 13.5 |
| DEC | | | | | JUN | | | | |
| 16... | 1500 | 38 | 205 | .0 | 17... | 1540 | 17 | 212 | 20.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 28... | 1520 | 30 | 205 | .0 | 28... | 1030 | 22 | 205 | 12.5 |
| MAR | | | | | SEP | | | | |
| 10... | 1700 | 26 | 233 | .0 | 16... | 1155 | 42 | 178 | 9.0 |
| APR | | | | | | | | | |
| 02... | 1740 | 152 | 80 | 5.0 | | | | | |

04074950 - WOLF RIVER AT LANGLADE, WI (LAT 44 11 25 LONG 088 44 00)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1250 | 1030 | 135 | 8.0 | 01... | 1610 | 1490 | 112 | 6.5 |
| DEC | | | | | JUN | | | | |
| 16... | 1250 | 558 | 170 | .5 | 19... | 1330 | 292 | 210 | 23.5 |
| JAN , 1986 | | | | | AUG | | | | |
| 28... | 1130 | 366 | 240 | .0 | 13... | 1345 | 382 | 196 | 18.0 |

04077400 - WOLF RIVER NEAR SHAWANO, WI (LAT 44 50 09 LONG 088 37 30)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 23... | 1110 | 830 | 130 | 9.0 | 02... | 0955 | 2830 | 100 | 4.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 10... | 1040 | 1000 | 120 | .0 | 29... | 1505 | 606 | 268 | 24.0 |

04079000 - WOLF RIVER AT NEW LONDON, WI (LAT 44 23 32 LONG 088 44 25)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| JAN , 1986 | | | | | JUL , 1986 | | | | |
| 09... | 1540 | 1730 | 300 | .0 | 31... | 1420 | 2720 | 350 | 24.0 |

04085200 - KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30 LONG 087 33 23)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | MAR , 1986 | | | | |
| 03... | 1420 | 59 | 640 | 13.5 | 26... | 1910 | 4980 | 230 | 2.0 |
| NOV | | | | | 27... | 0910 | 3420 | 230 | 1.5 |
| 18... | 1430 | 594 | 490 | 4.0 | 28... | 1150 | 1370 | 305 | 4.5 |
| DEC | | | | | JUN | | | | |
| 19... | 1200 | 67 | 550 | .0 | 05... | 1135 | 27 | 550 | 18.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 22... | 1240 | 57 | 710 | .0 | 23... | 1555 | 27 | 690 | 28.5 |
| FEB | | | | | SEP | | | | |
| 26... | 1430 | 43 | 715 | .0 | 09... | 0915 | 18 | 640 | 14.0 |

04085281 - EAST TWIN RIVER AT MISHICOT, WI (LAT 44 14 16 LONG 087 38 11)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | MAR , 1986 | | | | |
| 18... | 1540 | 624 | 460 | 4.0 | 28... | 1025 | 1220 | 290 | 3.0 |
| JAN , 1986 | | | | | JUN | | | | |
| 22... | 1500 | 62 | 635 | .0 | 05... | 1325 | 27 | 610 | 18.0 |
| FEB | | | | | JUL | | | | |
| 26... | 1140 | 44 | 700 | .0 | 22... | 1705 | 48 | 535 | 23.5 |
| MAR | | | | | SEP | | | | |
| 26... | 2135 | 2100 | 285 | 2.0 | 09... | 1105 | 17 | 610 | 15.0 |

04086000 - SHEBOYGAN RIVER AT SHEBOYGAN, WI (LAT 43 44 25 LONG 087 45 35)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | MAR , 1986 | | | | |
| 02... | 1615 | 168 | 640 | 13.0 | 27... | 1345 | 2950 | 370 | 3.5 |
| NOV | | | | | JUN | | | | |
| 19... | 1100 | 1970 | 480 | 6.5 | 04... | 1525 | 114 | 555 | 21.0 |
| DEC | | | | | JUL | | | | |
| 17... | 1415 | 271 | 385 | .0 | 24... | 1145 | 106 | 630 | 28.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 23... | 1235 | 231 | 760 | .0 | 08... | 1605 | 73 | 580 | 19.0 |
| FEB | | | | | | | | | |
| 26... | 0920 | 223 | 710 | .0 | | | | | |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

#### 04086500 - CEDAR CREEK NEAR CEDARBURG, WI (LAT 43 19 23 LONG 087 58 43)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | FEB , 1986 | | | | |
| 02... | 1030 | 25 | 610 | 9.0 | 25... | 1540 | 83 | 665 | .0 |
| NOV | | | | | JUN | | | | |
| 19... | 1510 | 603 | 400 | 8.0 | 03... | 0835 | 36 | 685 | 15.0 |
| DEC | | | | | JUL | | | | |
| 17... | 0850 | 83 | 260 | .0 | 28... | 1320 | 50 | 640 | 24.0 |
| FEB , 1986 | | | | | SEP | | | | |
| 04... | 1210 | 63 | 970 | .0 | 09... | 1225 | 25 | 670 | 15.0 |

#### 04086600 - MILWAUKEE RIVER NEAR CEDARBURG, WI (LAT 43 16 46 LONG 087 56 34)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| JAN , 1986 | | | | | JUN , 1986 | | | | |
| 23... | 1540 | 495 | 650 | .0 | 03... | 1025 | 214 | 670 | 19.0 |
| FEB | | | | | JUL | | | | |
| 04... | 1320 | 415 | 930 | .0 | 28... | 1525 | 207 | 615 | 26.0 |
| 25... | 1455 | 447 | 710 | .0 | SEP | | | | |
| | | | | | 09... | 1035 | 137 | 675 | 16.0 |

#### 04087030 - MENOMONEE RIVER AT MENOMONEE FALLS, WI (LAT 44 10 20 LONG 088 06 14)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUN , 1986 | | | | |
| 20... | 0900 | 262 | 570 | 3.0 | 02... | 1335 | 8.6 | 1010 | 18.0 |
| DEC | | | | | JUL | | | | |
| 16... | 1220 | 30 | 440 | .0 | 29... | 0925 | 18 | 880 | 21.5 |
| JAN , 1986 | | | | | SEP | | | | |
| 08... | 1455 | 16 | 880 | .0 | 09... | 0820 | 6.9 | 1040 | 14.0 |
| FEB | | | | | 11... | 1130 | 429 | 320 | 19.0 |
| 25... | 1045 | 21 | 990 | .0 | | | | | |

#### 04087088 - UNDERWOOD CREEK AT WAUWATOSA, WI (LAT 43 03 17 LONG 088 02 46)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1223 | 3.2 | 1110 | 12.0 | 28... | 1215 | 10 | 1340 | 15.0 |
| NOV | | | | | JUN | | | | |
| 13... | 1340 | 59 | 900 | 7.5 | 02... | 1100 | 5.0 | 1350 | 27.5 |
| FEB , 1986 | | | | | JUL | | | | |
| 04... | 1010 | 103 | E3600 | .5 | 16... | 1530 | 27 | 850 | 30.0 |
| MAR | | | | | AUG | | | | |
| 18... | 1445 | 114 | 900 | 3.5 | 27... | 1140 | 32 | 630 | 18.5 |

#### 04087120 - MENOMONEE RIVER AT WAUWATOSA, WI (LAT 43 02 44 LONG 087 59 59)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1450 | 21 | 950 | 12.0 | 28... | 1535 | 102 | 1050 | 16.0 |
| NOV | | | | | JUN | | | | |
| 13... | 1525 | 473 | 790 | 6.0 | 02... | 1604 | 27 | 1500 | 18.5 |
| DEC | | | | | JUL | | | | |
| 26... | 1248 | 28 | 1280 | .0 | 16... | 1810 | 189 | 740 | 22.0 |
| FEB , 1986 | | | | | SEP | | | | |
| 04... | 0807 | 222 | E5000 | .5 | 03... | 1035 | 32 | 1070 | 19.5 |
| MAR | | | | | 11... | 1350 | 4890 | 220 | 20.0 |
| 18... | 1130 | 866 | 700 | 2.5 | | | | | |

#### 04087159 - KINNICKINNIC R AT S. 11TH ST AT MILWAUKEE, WI (LAT 42 59 51 LONG 087 55 35)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUL , 1986 | | | | |
| 14... | 1630 | 32 | 850 | 7.5 | 16... | 1905 | 25 | 900 | 25.0 |
| DEC | | | | | AUG | | | | |
| 26... | 1500 | 6.3 | 1540 | .0 | 27... | 1650 | 17 | 810 | 18.0 |
| MAR , 1986 | | | | | | | | | |
| 18... | 0845 | 58 | 1100 | 4.0 | | | | | |

E ESTIMATE. MEASURED VALUE IS OUTSIDE OF THE RANGE OF AVAILABLE CALIBRATION STANDARDS.

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

04087204 - OAK CREEK AT SOUTH MILWAUKEE, WI (LAT 42 55 30 LONG 087 52 12)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | APR , 1986 | | | | |
| 14... | 1358 | 73 | 870 | 7.5 | 29... | 1630 | 6.2 | 1800 | 19.0 |
| DEC | | | | | JUN | | | | |
| 27... | 0833 | 5.1 | 1780 | .0 | 03... | 1605 | 4.4 | 1600 | 19.5 |
| FEB , 1986 | | | | | JUL | | | | |
| 03... | 0910 | 13 | E4000 | .5 | 11... | 0738 | 44 | 760 | 22.5 |
| MAR | | | | | AUG | | | | |
| 17... | 1207 | 69 | 950 | 3.0 | 28... | 0940 | 15 | 880 | 14.0 |

04087220 - ROOT RIVER NEAR FRANKLIN, WI (LAT 42 52 25 LONG 087 59 45)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | APR , 1986 | | | | |
| 14... | 0900 | 121 | 930 | 7.0 | 29... | 1350 | 23 | 1150 | 16.5 |
| DEC | | | | | JUN | | | | |
| 27... | 1140 | 12 | 1400 | .0 | 03... | 1135 | 8.4 | 1450 | 15.5 |
| FEB , 1986 | | | | | JUL | | | | |
| 03... | 1235 | 24 | E4100 | .0 | 17... | 1115 | 119 | 710 | 24.0 |
| MAR | | | | | AUG | | | | |
| 17... | 1450 | 213 | 690 | 3.0 | 28... | 1200 | 33 | 780 | 16.0 |

04087233 - ROOT RIVER CANAL NEAR FRANKLIN, WI (LAT 42 48 55 LONG 087 59 40)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | APR , 1986 | | | | |
| 14... | 1105 | 128 | 1010 | 8.0 | 29... | 0930 | 12 | 980 | 11.0 |
| DEC | | | | | JUN | | | | |
| 27... | 1417 | 13 | 1000 | .0 | 03... | 0905 | 27 | 930 | 13.5 |
| FEB , 1986 | | | | | JUL | | | | |
| 03... | 1402 | 44 | 760 | .0 | 17... | 1425 | 54 | 780 | 24.5 |
| MAR | | | | | AUG | | | | |
| 17... | 1750 | 194 | 490 | 4.0 | 28... | 1350 | 19 | 890 | 15.5 |

04087240 - ROOT RIVER AT RACINE, WI (LAT 42 45 05 LONG 087 49 25)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 02... | 1330 | 3.9 | 870 | 13.5 | 22... | 1535 | 61 | 925 | 10.5 |
| NOV | | | | | JUN | | | | |
| 15... | 0812 | 408 | 735 | 6.0 | 18... | 1735 | 48 | 955 | 19.5 |
| DEC | | | | | AUG | | | | |
| 19... | 1030 | 64 | 780 | .0 | 05... | 1710 | 25 | 885 | 22.5 |
| JAN , 1986 | | | | | SEP | | | | |
| 28... | 1615 | 50 | 1090 | .0 | 16... | 1735 | 116 | 810 | 13.0 |
| MAR | | | | | | | | | |
| 13... | 1550 | 1820 | 390 | .5 | | | | | |
| 19... | 1120 | 869 | 575 | 2.0 | | | | | |

04087257 - PIKE RIVER NEAR RACINE, WI (LAT 42 30 49 LONG 087 51 30)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | MAR , 1986 | | | | |
| 02... | 1110 | 4.5 | 415 | 9.0 | 14... | 0955 | 184 | 470 | 1.0 |
| NOV | | | | | APR | | | | |
| 14... | 1515 | 104 | 700 | 8.0 | 22... | 1305 | 14 | 730 | 9.0 |
| DEC | | | | | JUN | | | | |
| 18... | 1420 | 22 | 790 | .0 | 18... | 1545 | 17 | 690 | 18.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 28... | 1355 | 14 | 820 | .0 | 05... | 1505 | 1.3 | 555 | 21.5 |
| FEB | | | | | SEP | | | | |
| 20... | 1140 | 64 | 540 | .5 | 16... | 1530 | 22 | 715 | 15.5 |

### ST. CROIX RIVER BASIN

05333500 - ST. CROIX RIVER NEAR DANBURY, WI (LAT 46 04 28 LONG 092 14 50)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 08... | 1150 | 3060 | 92 | 9.5 | 01... | 1800 | 5500 | 112 | 5.5 |
| DEC | | | | | 04... | 1000 | 6670 | 55 | 3.0 |
| 05... | 1130 | 1500 | 106 | .5 | JUN | | | | |
| JAN , 1986 | | | | | 02... | 1040 | 1510 | 132 | 16.0 |
| 07... | 1615 | 1390 | 150 | .0 | JUL | | | | |
| FEB | | | | | 30... | 0745 | 2060 | 100 | 20.0 |
| 26... | 1300 | 1210 | 163 | .0 | | | | | |

E ESTIMATE. MEASURED VALUE IS OUTSIDE OF THE RANGE OF AVAILABLE CALIBRATION STANDARDS.

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### CHIPPEWA RIVER BASIN

05356000 - CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57 LONG 091 04 44)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 04... | 1400 | 3080 | 40 | 10.0 | 02... | 1215 | 474 | 58 | 5.0 |
| DEC | | | | | JUN | | | | |
| 05... | 1350 | 1510 | 72 | 1.5 | 04... | 1230 | 229 | 66 | 19.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 26... | 1200 | 1260 | 92 | .5 | 29... | 1330 | 1060 | 65 | 23.5 |
| FEB | | | | | | | | | |
| 28... | 1250 | 143 | 122 | 1.0 | | | | | |

454657091300600 - BIG SISSABAGAMA TRIBUTARY NEAR STONE LAKE, WI (LAT 45 46 57 LONG 091 30 06)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | OXYGEN, DISSOLVED (MG/L) (00300) | PHOSPHORUS, TOTAL (MG/L AS P) (00665) |
|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | |
| 24... | 1530 | -- | 60 | 7.00 | 10.5 | 11.0 | .140 |
| JUN | | | | | | | |
| 13... | 1035 | E5.0 | 77 | 6.90 | 20.5 | 7.1 | .150 |
| JUL | | | | | | | |
| 15... | 1035 | E5.0 | 73 | 6.80 | 18.5 | 8.6 | .150 |
| AUG | | | | | | | |
| 14... | 1520 | E5.0 | 71 | 7.20 | 19.5 | 7.6 | .100 |

05356500 - CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08 LONG 091 15 39)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 03... | 1215 | 5280 | 52 | 11.0 | 01... | 1310 | 15800 | E50 | 5.5 |
| NOV | | | | | JUN | | | | |
| 20... | 1240 | 2180 | 82 | 1.0 | 02... | 0820 | 16700 | 43 | 1.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 10... | 1020 | 1890 | 110 | .0 | 30... | 1610 | 1980 | 60 | 23.0 |
| FEB | | | | | | | | | |
| 27... | 1030 | 619 | 65 | .0 | | | | | |

05360500 - FLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21 LONG 091 12 34)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 03... | 1130 | 6680 | 72 | 11.0 | 02... | 1515 | 17200 | 66 | 1.5 |
| NOV | | | | | 04... | 0900 | 14000 | 70 | 1.5 |
| 20... | 1320 | 3820 | 82 | 1.0 | MAY | | | | |
| JAN , 1986 | | | | | 22... | 1510 | 1600 | 94 | 19.0 |
| 10... | 1400 | 1680 | 107 | .0 | JUL | | | | |
| FEB | | | | | 30... | 1300 | 1670 | 107 | 23.5 |
| 27... | 1330 | 953 | 60 | .0 | | | | | |

05362000 - JUMP RIVER AT SHELDON, WI (LAT 45 18 29 LONG 090 57 23)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 03... | 1000 | 2920 | 48 | 8.0 | 02... | 1000 | 13400 | 52 | 5.5 |
| NOV | | | | | MAY | | | | |
| 22... | 1400 | 370 | 90 | .5 | 22... | 1100 | 154 | 122 | 17.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 16... | 1055 | 168 | 155 | .5 | 30... | 1230 | 667 | 68 | 24.0 |
| FEB | | | | | | | | | |
| 20... | 1535 | 144 | 74 | .0 | | | | | |

E ESTIMATE.

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### CHIPPEWA RIVER BASIN--CONTINUED

05365707 - NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25 LONG 090 50 57)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | SEP , 1986 | | | | |
| 11... | 0900 | 31 | 120 | 7.5 | 03... | 1215 | 6.5 | 200 | 20.0 |
| MAY | | | | | 19... | 1100 | 140 | 125 | 12.5 |
| 08... | 1310 | 11 | 162 | 15.5 | 22... | 1200 | 2390 | 63 | 16.0 |
| JUL | | | | | 22... | 1500 | 2490 | 63 | 16.0 |
| 11... | 1300 | 21 | 185 | 19.0 | 23... | 0930 | 1190 | 65 | 16.0 |
| 28... | 1320 | 94 | 70 | 18.0 | 23... | 1730 | 854 | 65 | 17.5 |
| | | | | | 24... | 0900 | 531 | 73 | 15.0 |

05368000 - HAY RIVER AT WHEELER, WI (LAT 45 02 52 LONG 091 54 39)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 02... | 0830 | 504 | 392 | 6.0 | 02... | 1400 | 1960 | 170 | 10.0 |
| DEC | | | | | MAY | | | | |
| 04... | 1030 | 300 | 365 | .5 | 23... | 1530 | 341 | 270 | 16.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 10... | 1210 | 270 | 391 | 1.0 | 28... | 1100 | 502 | 308 | 19.5 |
| FEB | | | | | | | | | |
| 26... | 1130 | 249 | -- | .0 | | | | | |

05369000 - RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02 LONG 091 55 57)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1730 | 2840 | 190 | 10.5 | 02... | 1750 | 6960 | 150 | 9.0 |
| DEC | | | | | MAY | | | | |
| 04... | 1115 | 1050 | 240 | 1.0 | 29... | 1350 | 971 | 200 | 21.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 10... | 1100 | 1180 | 260 | 1.5 | 29... | 0810 | 2630 | 182 | 25.0 |
| FEB | | | | | SEP | | | | |
| 25... | 1335 | 1110 | 248 | 1.0 | 25... | 1540 | 4700 | 209 | 17.0 |

05369945 - EAU GALLE R A LOW-WTR BRIDGE A SPRING VALLEY, WI (LAT 44 52 02 LONG 092 15 07)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | JUL , 1986 | | | | |
| 28... | 1330 | 2320 | 155 | 15.0 | 29... | 1110 | 21 | 324 | 19.0 |
| 30... | 1445 | 131 | 210 | 14.5 | SEP | | | | |
| MAY | | | | | 16... | 1145 | 72 | 234 | 12.0 |
| 29... | 1130 | 17 | 300 | 19.0 | 26... | 1250 | 74 | 262 | 16.5 |
| JUN | | | | | | | | | |
| 30... | 1300 | 16 | 370 | 16.5 | | | | | |

### TREMPEALEAU RIVER BASIN

05379500 - TREMPEALEAU RIVER AT DODGE, WI (LAT 44 07 55 LONG 091 33 14)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 02... | 1110 | 743 | 255 | 8.0 | 01... | 1725 | 775 | 260 | 14.0 |
| NOV | | | | | JUN | | | | |
| 19... | 1620 | 598 | 250 | 2.0 | 03... | 1345 | 373 | 300 | 20.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 06... | 1630 | 328 | -- | .0 | 28... | 1800 | 899 | -- | 22.5 |
| FEB | | | | | | | | | |
| 18... | 1400 | 317 | 300 | .0 | | | | | |

### BLACK RIVER BASIN

05380806 - BLACK RIVER AT MEDFORD, WI (LAT 45 08 09 LONG 090 20 45)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 17... | 1205 | 60 | 80 | 6.5 | 02... | 1405 | 760 | 55 | 5.0 |
| NOV | | | | | AUG | | | | |
| 21... | 1020 | 75 | 118 | .0 | 05... | 1505 | 8.5 | 175 | 21.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 10... | 1310 | 17 | 155 | .0 | 24... | 1625 | 294 | 80 | 16.0 |
| MAR | | | | | | | | | |
| 04... | 1200 | 14 | 190 | 1.0 | | | | | |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### BLACK RIVER BASIN--CONTINUED

05381000 - BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 35 LONG 090 36 54)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 03... | 1000 | 2290 | 90 | 11.0 | 02... | 1615 | 5530 | 70 | 8.5 |
| NOV | | | | | JUN | | | | |
| 21... | 1230 | 1100 | 148 | .0 | 04... | 1220 | 61 | 180 | 23.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 07... | 0930 | 180 | -- | .0 | 29... | 1915 | 675 | 140 | 25.0 |
| FEB | | | | | | | | | |
| 19... | 1000 | 181 | 205 | .0 | | | | | |

### WISCONSIN RIVER BASIN

05391000 - WISCONSIN R AT RAINBOW LK NEAR LAKE TOMAHAWK, WI (LAT 45 49 58 LONG 089 32 51)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | JUL , 1986 | | | | |
| 08... | 1445 | 1960 | 52 | 11.0 | 23... | 1530 | 442 | 70 | 24.0 |
| APR , 1986 | | | | | | | | | |
| 03... | 1500 | 227 | 80 | 4.0 | | | | | |

05393500 - SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58 LONG 089 58 47)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | JUN , 1986 | | | | |
| 07... | 1350 | 594 | 50 | 13.0 | 04... | 1325 | 9.9 | 130 | 18.5 |
| DEC | | | | | AUG | | | | |
| 23... | 1245 | 44 | 120 | .0 | 05... | 1215 | 20 | 110 | 21.5 |
| FEB , 1986 | | | | | SEP | | | | |
| 06... | 1350 | 31 | 95 | .0 | 29... | 1600 | 626 | 72 | 16.0 |
| MAR | | | | | | | | | |
| 31... | 1500 | 1880 | 35 | 3.0 | | | | | |

05394500 - PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09 LONG 089 38 59)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUN , 1986 | | | | |
| 14... | 1355 | 209 | 115 | 3.5 | 04... | 1040 | 94 | 190 | 18.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 03... | 1530 | 140 | 120 | .0 | 28... | 1610 | 213 | 180 | 20.0 |
| FEB | | | | | SEP | | | | |
| 26... | 1415 | 139 | 170 | .5 | 03... | 1620 | 102 | 185 | 18.5 |
| APR | | | | | | | | | |
| 03... | 1115 | 1300 | 48 | 4.0 | | | | | |

05395000 - WISCONSIN RIVER AT MERRILL, WI (LAT 45 10 41 LONG 089 40 52)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 11... | 1100 | 9170 | 80 | 8.0 | 02... | 1200 | 20300 | 80 | 4.5 |

05397500 - EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06 LONG 089 33 00)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 03... | 1400 | 1100 | 85 | 8.5 | 01... | 1500 | 3520 | 60 | 8.5 |
| DEC | | | | | MAY | | | | |
| 13... | 1600 | 255 | 170 | .5 | 03... | 1600 | 96 | 290 | 21.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 24... | 1430 | 188 | 230 | .5 | 06... | 1325 | 132 | 215 | 23.0 |
| MAR | | | | | SEP | | | | |
| 04... | 1500 | 140 | 175 | .5 | 30... | 1530 | 1360 | 90 | 15.0 |

05399500 - BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19 LONG 090 04 46)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | JUN , 1986 | | | | |
| 16... | 1200 | 159 | 175 | 6.0 | 26... | 1545 | 7.8 | 255 | 28.0 |
| DEC | | | | | AUG | | | | |
| 23... | 1300 | 26 | -- | .0 | 07... | 1300 | 44 | 205 | 22.5 |
| FEB , 1986 | | | | | SEP | | | | |
| 04... | 1225 | 36 | 230 | .0 | 26... | 1530 | 1460 | 135 | 17.5 |
| APR | | | | | | | | | |
| 24... | 1230 | 60 | -- | 5.5 | | | | | |

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WISCONSIN RIVER BASIN--CONTINUED

05400650 - LITTLE PLOVER RIVER AT PLOVER, WI (LAT 44 28 26 LONG 089 31 44)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 15... | 1100 | 13 | 300 | 7.5 | 03... | 1510 | 20 | 370 | 7.0 |
| DEC | | | | | JUN | | | | |
| 11... | 1000 | 14 | 300 | 2.5 | 05... | 0750 | 13 | 410 | 10.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 01... | 0947 | 11 | -- | .5 | 30... | 1110 | 11 | -- | 13.5 |
| FEB | | | | | | | | | |
| 19... | 1550 | 12 | 360 | 6.5 | | | | | |

05402000 - YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05 LONG 090 07 15)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 15... | 1245 | 159 | 100 | 6.0 | 10... | 1230 | 217 | 130 | 8.5 |
| DEC | | | | | JUN | | | | |
| 11... | 1325 | 91 | 135 | .5 | 04... | 1545 | 11 | 170 | 18.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 17... | 1400 | 47 | 160 | .0 | 30... | 0905 | 548 | 120 | 22.5 |
| FEB | | | | | SEP | | | | |
| 19... | 1200 | 36 | 140 | .0 | 04... | 0900 | 27 | 130 | 17.0 |

05403500 - LEMONWEIR RIVER AT NEW LISBON, WI (LAT 43 52 47 LONG 090 09 40)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 04... | 1400 | 536 | 125 | 10.5 | 08... | 1040 | 1310 | 110 | 10.5 |
| NOV | | | | | JUN | | | | |
| 20... | 1230 | 969 | 140 | 2.5 | 10... | 1210 | 151 | 180 | 20.5 |
| DEC | | | | | JUL | | | | |
| 23... | 1130 | 322 | 100 | .0 | 30... | 1250 | 809 | 103 | 23.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 24... | 1230 | 316 | 150 | .0 | 03... | 1050 | 140 | 180 | 19.0 |
| MAR | | | | | | | | | |
| 04... | 1230 | 270 | 155 | 2.0 | | | | | |

05404000 - WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22 LONG 089 45 25)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUN , 1986 | | | | |
| 21... | 1225 | 22700 | 130 | 2.0 | 09... | 1210 | 4430 | 160 | 22.0 |
| APR , 1986 | | | | | JUL | | | | |
| 03... | 1420 | 43400 | 145 | 6.0 | 28... | 1235 | 7640 | 195 | 25.5 |

05405000 - BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51 LONG 089 38 09)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | APR , 1986 | | | | |
| 21... | 1510 | 1260 | 270 | 2.0 | 10... | 0930 | 567 | 330 | 10.0 |
| DEC | | | | | JUN | | | | |
| 16... | 1405 | 513 | 380 | .5 | 04... | 1210 | 277 | 430 | 20.5 |
| JAN , 1986 | | | | | JUL | | | | |
| 09... | 1310 | 403 | 370 | .0 | 31... | 1100 | 402 | 340 | 22.5 |
| FEB | | | | | SEP | | | | |
| 18... | 1215 | 353 | 385 | .5 | 09... | 1245 | 226 | 380 | 16.0 |

05406450 - BLACK EARTH CREEK NEAR CROSS PLAINS, WI (LAT 43 05 15 LONG 089 34 52)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC , 1985 | | | | | | | | | | | |
| 11... | 0815 | 2.3 | 500 | 7.50 | 4.5 | 2.4 | .280 | .90 | .100 | .030 | 62 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 0820 | 2.1 | 520 | 7.60 | 5.5 | 2.6 | .270 | .60 | .080 | .017 | 18 |
| MAY | | | | | | | | | | | |
| 07... | 0755 | 2.7 | 600 | 7.50 | 11.0 | 2.3 | <.020 | 1.0 | .100 | .025 | 41 |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WISCONSIN RIVER BASIN--CONTINUED | | | | | | | | | | | |
| 054064502 - BLACK EARTH CREEK AT LOW ROAD LOW FLOW SITE NO 1 (LAT 43 05 17 LONG 089 35 25) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 0905 | 2.7 | 380 | 7.60 | 3.5 | 2.4 | .240 | 1.0 | .120 | .040 | 87 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 0905 | 2.2 | 560 | 7.70 | 5.0 | 2.6 | .230 | .80 | .120 | .017 | 49 |
| MAY | | | | | | | | | | | |
| 07... | 0845 | 3.0 | 610 | 7.70 | 11.5 | 2.2 | <.020 | .80 | .100 | .023 | 29 |
| 054064509 - BLACK EARTH CREEK LOW FLOW SITE NO. 3 (LAT 43 00 01 LONG 089 37 32) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 0950 | 3.1 | 425 | 8.10 | 2.5 | 2.4 | .190 | 1.0 | .100 | .050 | 119 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 0955 | 2.5 | 600 | 8.00 | 4.0 | 2.5 | .210 | 1.2 | .120 | .024 | 51 |
| MAY | | | | | | | | | | | |
| 07... | 0930 | 3.5 | 610 | 8.00 | 11.0 | 2.2 | .020 | 1.4 | .280 | .028 | 61 |
| 05406454 - BLACK EARTH CREEK LOW FLOW SITE NO. 4 (LAT 43 00 39 LONG 089 38 16) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1050 | 14 | 450 | 8.20 | 5.5 | 2.4 | .040 | .40 | .040 | .023 | 45 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 1050 | 12 | 550 | 8.00 | 6.5 | 2.6 | <.020 | .20 | .030 | .014 | 15 |
| MAY | | | | | | | | | | | |
| 07... | 1020 | 13 | 560 | 7.90 | 12.5 | 2.3 | <.020 | .40 | .060 | .018 | 52 |
| 05406468 - BREWERY CREEK @ ENCHANT. VLY. RD NR CROSS PLAINS (LAT 43 07 57 LONG 089 37 00) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1310 | 1.9 | 525 | 7.90 | 3.0 | 2.2 | .120 | .70 | .170 | .066 | 237 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 1245 | 2.2 | 760 | 7.90 | 5.5 | 2.3 | .130 | .60 | .160 | .027 | 113 |
| MAY | | | | | | | | | | | |
| 07... | 1235 | 2.2 | 850 | 7.80 | 16.0 | 1.9 | .020 | .50 | .110 | .028 | 81 |
| 05406478 - BLACK EARTH CREEK LOW FLOW SITE NO. 6 (LAT 43 01 55 LONG 089 39 37) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1410 | 22 | 425 | 8.30 | 5.5 | 2.4 | .030 | .30 | .480 | .480 | 51 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 1340 | 20 | 630 | 8.40 | 6.5 | 2.5 | .020 | .20 | .040 | .014 | 22 |
| MAY | | | | | | | | | | | |
| 07... | 1415 | 22 | 580 | 8.20 | 14.5 | 2.2 | <.020 | .40 | .040 | .018 | 28 |
| 05406483 - BLACK EARTH CREEK LOW FLOW SITE NO. 7 (LAT 43 02 30 LONG 089 40 12) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1415 | 25 | 630 | 8.20 | 5.0 | 2.8 | .030 | .30 | .120 | .093 | 39 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 0910 | 23 | 645 | 7.70 | 6.0 | 2.9 | <.020 | .40 | .160 | .127 | 9 |
| MAY | | | | | | | | | | | |
| 07... | 0810 | 26 | 630 | 7.90 | 11.5 | 2.3 | <.020 | .30 | .140 | .112 | 17 |
| 05406487 - BLACK EARTH CREEK LOW FLOW SITE NO. 8 (LAT 43 03 17 LONG 089 40 59) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1345 | 29 | 630 | 8.15 | 5.0 | 2.7 | .030 | .30 | .110 | .094 | 28 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 1110 | 27 | 630 | 7.90 | 6.5 | 2.8 | <.020 | .20 | .120 | .099 | 15 |
| MAY | | | | | | | | | | | |
| 07... | 0855 | 27 | 620 | 8.00 | 12.0 | 2.2 | <.020 | .20 | .100 | .080 | 16 |
| 05406488 - BLACK EARTH CREEK TRIBUTARY NR CROSS PLAINS, WI (LAT 43 07 05 LONG 089 40 58) | | | | | | | | | | | |
| DEC , 1985 | | | | | | | | | | | |
| 11... | 1240 | 4.3 | 600 | 8.25 | 3.5 | 1.9 | .040 | .20 | .040 | .015 | 42 |
| FEB , 1986 | | | | | | | | | | | |
| 19... | 1010 | 3.2 | 600 | 8.20 | 5.0 | 1.8 | <.020 | .20 | .030 | .013 | 20 |
| MAY | | | | | | | | | | | |
| 07... | 0945 | 5.0 | 600 | 8.30 | 11.5 | 1.9 | .020 | .20 | .040 | .018 | 46 |

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | PHOS-PHORUS, TOTAL (MG/L AS P) (00665) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | SEDI-MENT, SUS-PENDED (MG/L) (80154) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WISCONSIN RIVER BASIN--CONTINUED | | | | | | | | | | | |
| 05406494 - BLACK EARTH CREEK LOW FLOW SITE NO. 9 (LAT 43 03 39 LONG 089 41 24) | | | | | | | | | | | |
| DEC , 1985<br>11... | 1050 | 39 | 620 | 7.85 | 4.5 | 2.4 | .040 | .40 | .090 | .058 | 45 |
| FEB , 1986<br>19... | 1225 | 37 | 610 | 8.00 | 6.5 | 2.6 | .020 | .40 | .120 | .078 | 15 |
| MAY<br>07... | 1045 | 37 | 600 | 8.20 | 12.5 | 2.2 | <.020 | .20 | .080 | .066 | 9 |
| 05406497 - BLACK EARTH CREEK LOW FLOW SITE NO. 10 (LAT 43 05 06 LONG 089 42 36) | | | | | | | | | | | |
| DEC , 1985<br>11... | 0900 | 41 | 590 | 8.00 | 4.0 | 2.3 | .020 | .40 | .100 | .055 | 70 |
| FEB , 1986<br>19... | 1410 | 41 | 605 | 8.20 | 6.5 | 2.4 | <.020 | .20 | .080 | .057 | 14 |
| MAY<br>07... | 1135 | 42 | 590 | 8.20 | 13.5 | 2.0 | <.020 | .20 | .080 | .057 | 10 |
| 054064975 - BLACK EARTH CREEK TRIBUTARY (LAT 43 07 19 LONG 089 42 54) | | | | | | | | | | | |
| DEC , 1985<br>11... | 0955 | .29 | 650 | 7.80 | 2.0 | 2.1 | .810 | 1.9 | .190 | .115 | 91 |
| FEB , 1986<br>19... | 1315 | .29 | 630 | 8.00 | 3.0 | 2.1 | 2.10 | 3.6 | .350 | .146 | 65 |
| MAY<br>07... | 1215 | .39 | 600 | 8.10 | 20.0 | 1.4 | .840 | 1.3 | .210 | .155 | 19 |
| 054064978 - TRIBUTARY BLACK EARTH CREEK LOW FLOW SITE NO. 11 (LAT 43 07 47 LONG 089 43 05) | | | | | | | | | | | |
| DEC , 1985<br>11... | 0815 | .29 | 770 | 7.60 | .5 | 9.4 | .220 | .60 | .220 | .179 | 39 |
| MAY , 1986<br>07... | 1250 | .31 | 630 | 8.10 | 17.0 | 6.6 | .060 | .60 | .300 | .230 | 9 |

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| 05408000 - KICKAPOO RIVER AT LAFARGE, WI (LAT 43 34 27 LONG 090 38 35) | | | | | | | | | |
| OCT , 1985<br>04... | 0930 | 211 | 450 | 11.5 | MAR , 1986<br>20... | 1330 | 635 | 300 | 1.5 |
| NOV<br>25... | 1230 | 246 | 180 | .5 | APR<br>09... | 1050 | 237 | 440 | 9.0 |
| DEC<br>13... | 1020 | 224 | 440 | .0 | JUN<br>16... | 1505 | 193 | 470 | 20.5 |
| JAN , 1986<br>08... | 1150 | 201 | 410 | .0 | JUL<br>29... | 1315 | 201 | 400 | 21.5 |
| FEB<br>20... | 1310 | 212 | 455 | .0 | AUG<br>28... | 1355 | 187 | 455 | 16.0 |
| MAR<br>19... | 1615 | 2210 | 210 | 1.0 | | | | | |
| 05410490 - KICKAPOO RIVER AT STEUBEN, WI (LAT 43 10 58 LONG 090 51 30) | | | | | | | | | |
| OCT , 1985<br>22... | 1300 | 555 | 495 | 12.0 | APR , 1986<br>21... | 1234 | 638 | 490 | 11.0 |
| DEC<br>13... | 1425 | 469 | 460 | .0 | JUN<br>09... | 1156 | 468 | 500 | 19.5 |
| JAN , 1986<br>28... | 1315 | 412 | 560 | .0 | AUG<br>04... | 1109 | 478 | 480 | 20.5 |
| MAR<br>10... | 1200 | 546 | 490 | 3.0 | SEP<br>22... | 1250 | 714 | 480 | 17.0 |
| 20... | 1045 | 1510 | 270 | .5 | | | | | |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### PLATTE RIVER BASIN

05414000 - PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52 LONG 090 38 25)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 30... | 1050 | 78 | 620 | 9.0 | 21... | 1829 | 141 | 610 | 10.5 |
| DEC | | | | | JUN | | | | |
| 19... | 1354 | 67 | 440 | .0 | 09... | 1739 | 98 | 600 | 23.5 |
| JAN , 1986 | | | | | AUG | | | | |
| 28... | 0905 | 71 | 620 | .0 | 04... | 1829 | 70 | 580 | 22.5 |
| MAR | | | | | SEP | | | | |
| 10... | 1634 | 165 | 570 | 3.5 | 22... | 1750 | 85 | 630 | 20.0 |

### GALENA RIVER BASIN

05415000 - GALENA RIVER AT BUNCOMBE, WI (LAT 42 30 49 LONG 090 22 40)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 30... | 1350 | 70 | 950 | 11.0 | 22... | 0950 | 111 | 870 | 8.0 |
| JAN , 1986 | | | | | JUN | | | | |
| 27... | 1128 | 44 | 1010 | .0 | 10... | 0900 | 123 | 850 | 20.5 |
| MAR | | | | | AUG | | | | |
| 11... | 0835 | 390 | 480 | 1.0 | 05... | 0756 | 68 | 890 | 20.0 |

### ROCK RIVER BASIN

05425912 - BEAVER DAM RIVER AT BEAVER DAM, WI (LAT 43 26 57 LONG 088 50 21)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| FEB , 1986 | | | | | JUL , 1986 | | | | |
| 27... | 1335 | 148 | 820 | .0 | 15... | 1125 | 124 | 385 | 22.5 |
| JUN | | | | | | | | | |
| 02... | 0945 | 14 | 380 | 19.0 | | | | | |

05426250 - BARK RIVER NEAR ROME, WI (LAT 42 57 39 LONG 088 40 09)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 08... | 1300 | 50 | 580 | 13.0 | 23... | 1035 | 107 | 600 | 9.0 |
| NOV | | | | | JUN | | | | |
| 15... | 1335 | 209 | 555 | 3.5 | 19... | 1105 | 84 | 530 | 22.5 |
| DEC | | | | | AUG | | | | |
| 19... | 1525 | 113 | 680 | .0 | 06... | 1020 | 77 | 560 | 21.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 29... | 1220 | 82 | 740 | .0 | 17... | 1030 | 218 | 510 | 14.5 |
| MAR | | | | | | | | | |
| 13... | 1005 | 282 | 400 | .0 | | | | | |

05427570 - ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15 LONG 089 05 25)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | MAY , 1986 | | | | |
| 01... | 1110 | 1390 | 545 | 13.0 | 23... | 1230 | 2360 | 605 | 16.0 |
| NOV | | | | | JUN | | | | |
| 12... | 1615 | 5030 | 565 | 3.0 | 17... | 1505 | 1080 | 570 | 23.0 |
| MAR , 1986 | | | | | JUL | | | | |
| 13... | 1235 | 3400 | 740 | 2.5 | 16... | 1130 | 2610 | 555 | 25.0 |
| 26... | 1500 | 8290 | 420 | 4.0 | SEP | | | | |
| APR | | | | | 22... | 1140 | 5040 | 430 | 18.0 |
| 21... | 1100 | 5010 | 490 | 10.5 | | | | | |

05429500 - YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32 LONG 089 18 18)

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 04... | 1320 | 204 | 420 | 14.5 | 02... | 1140 | 347 | 470 | 9.0 |
| NOV | | | | | 23... | 1320 | 347 | 470 | 11.5 |
| 05... | 1045 | 363 | 425 | 9.0 | MAY | | | | |
| DEC | | | | | 27... | 0725 | 175 | 495 | 17.0 |
| 05... | 1220 | 354 | 445 | .0 | JUN | | | | |
| 16... | 1250 | 389 | 450 | .0 | 20... | 0655 | 136 | 460 | 22.0 |
| JAN , 1986 | | | | | JUL | | | | |
| 09... | 0825 | 353 | 470 | .0 | 18... | 0810 | 170 | 425 | 26.0 |
| FEB | | | | | AUG | | | | |
| 03... | 0920 | 394 | 475 | 1.0 | 06... | 1240 | 119 | 420 | 23.0 |
| 25... | 1340 | 268 | 510 | 2.0 | 28... | 1345 | 110 | 380 | 22.0 |
| MAR | | | | | SEP | | | | |
| 11... | 1400 | 237 | 500 | 4.0 | 17... | 1325 | 193 | 390 | 18.0 |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### ROCK RIVER BASIN--CONTINUED

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) | DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) (00061) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| 05430150 - BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00 LONG 089 11 48) | | | | | | | | | |
| OCT , 1985 | | | | | MAY , 1986 | | | | |
| 07... | 0940 | 92 | 1140 | 11.5 | 22... | 1126 | 116 | 1140 | 14.5 |
| NOV | | | | | JUN | | | | |
| 12... | 0915 | 146 | 1000 | 8.0 | 20... | 1005 | 108 | 1310 | 20.5 |
| DEC | | | | | JUL | | | | |
| 16... | 1116 | 110 | 1060 | 3.0 | 16... | 1300 | 114 | 1060 | 24.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 30... | 1150 | 98 | 1160 | 2.0 | 11... | 1415 | 86 | 1180 | 21.0 |
| MAR | | | | | SEP | | | | |
| 12... | 1105 | 207 | 850 | 4.0 | 15... | 1425 | 101 | 1080 | 16.5 |
| APR | | | | | | | | | |
| 24... | 1235 | 116 | 1140 | 15.0 | | | | | |
| 05430175 - YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50 LONG 089 10 09) | | | | | | | | | |
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 07... | 1140 | 353 | 640 | 12.0 | 24... | 1105 | 581 | 865 | 13.0 |
| NOV | | | | | MAY | | | | |
| 12... | 1230 | 685 | 770 | 6.0 | 22... | 1000 | 417 | 1040 | 14.0 |
| DEC | | | | | JUN | | | | |
| 17... | 1000 | 522 | 520 | .0 | 23... | 1355 | 150 | 1200 | 21.0 |
| FEB , 1986 | | | | | AUG | | | | |
| 03... | 1235 | 572 | 935 | 2.5 | 12... | 1415 | 141 | 1060 | -- |
| MAR | | | | | SEP | | | | |
| 12... | 1335 | 656 | 760 | 4.0 | 18... | 1205 | 458 | 830 | 17.0 |
| 05430500 - ROCK RIVER AT AFTON, WI (LAT 42 36 33 LONG 089 04 14) | | | | | | | | | |
| OCT , 1985 | | | | | MAR , 1986 | | | | |
| 01... | 1215 | 1890 | 620 | 13.5 | 19... | 1025 | 7400 | 550 | 3.5 |
| NOV | | | | | JUN | | | | |
| 13... | 0830 | 5810 | 460 | 4.0 | 17... | 0955 | 1480 | 685 | 20.0 |
| JAN , 1986 | | | | | SEP | | | | |
| 02... | 1035 | 3110 | 720 | .0 | 15... | 0955 | 4020 | 490 | 17.0 |
| 31... | 1230 | 2670 | 740 | .0 | | | | | |
| 05431486 - TURTLE CREEK AT CARVERS ROCK ROAD NR CLINTON, WI (LAT 42 35 50 LONG 088 49 45) | | | | | | | | | |
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 01... | 1705 | 76 | 695 | 12.0 | 21... | 1535 | 101 | 665 | 9.0 |
| NOV | | | | | JUN | | | | |
| 13... | 1605 | 377 | 635 | 6.5 | 18... | 0925 | 115 | 710 | 18.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 02... | 1450 | 152 | 710 | .0 | 05... | 0855 | 79 | 725 | 19.0 |
| 31... | 1510 | 139 | 720 | .0 | SEP | | | | |
| MAR | | | | | 16... | 1025 | 126 | 640 | 13.5 |
| 14... | 1100 | 836 | 380 | 2.5 | | | | | |
| 05432500 - PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40 LONG 090 07 07) | | | | | | | | | |
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 29... | 1130 | 154 | 700 | 9.5 | 23... | 1250 | 299 | 640 | 10.5 |
| DEC | | | | | JUN | | | | |
| 18... | 1510 | 172 | 680 | .0 | 05... | 1403 | 221 | 680 | 17.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 03... | 1130 | 173 | 610 | .0 | 05... | 1103 | 118 | 650 | 20.0 |
| 30... | 1345 | 161 | 690 | .0 | SEP | | | | |
| MAR | | | | | 18... | 1225 | 139 | 680 | 14.5 |
| 11... | 1240 | 599 | 540 | 2.0 | | | | | |
| 19... | 1410 | 1920 | 415 | 3.5 | | | | | |
| 05433000 - EAST BR PECATONICA R NR BLANCHARDVILLE, WI (LAT 42 47 10 LONG 089 51 40) | | | | | | | | | |
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 29... | 1415 | 143 | 690 | 9.5 | 23... | 0915 | 228 | 580 | 9.0 |
| DEC | | | | | JUN | | | | |
| 20... | 1325 | 168 | 600 | .0 | 05... | 1056 | 186 | 590 | 17.5 |
| JAN , 1986 | | | | | AUG | | | | |
| 30... | 1055 | 144 | 585 | .0 | 11... | 1510 | 138 | 560 | 19.5 |
| MAR | | | | | SEP | | | | |
| 12... | 1434 | 300 | 510 | 3.0 | 18... | 0945 | 142 | 570 | 13.5 |
| 13... | 1415 | 310 | 540 | 4.5 | | | | | |
| 19... | 1150 | 1410 | 330 | 3.0 | | | | | |

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### ROCK RIVER BASIN--CONTINUED

05434500 - PECATONICA RIVER AT MARTINTOWN, WI (LAT 42 30 34 LONG 089 47 58)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 31... | 1230 | 678 | 650 | 9.5 | 24... | 1548 | 1060 | 660 | 12.5 |
| DEC | | | | | JUN | | | | |
| 17... | 1200 | 922 | 700 | .0 | 04... | 1207 | 824 | 650 | 19.0 |
| JAN , 1986 | | | | | AUG | | | | |
| 29... | 1512 | 692 | 680 | .0 | 11... | 1315 | 564 | 620 | 20.5 |
| MAR | | | | | | | | | |
| 13... | 1200 | 2170 | 550 | 3.0 | | | | | |
| 20... | 1330 | 3130 | 470 | 1.5 | | | | | |

### ILLINOIS RIVER BASIN

05543830 - FOX RIVER AT WAUKESHA, WI (LAT 43 00 17 LONG 088 14 37)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| FEB , 1986 | | | | | JUN , 1986 | | | | |
| 04... | 1155 | 125 | 1640 | .5 | 02... | 1100 | 39 | 1100 | 19.0 |
| MAR | | | | | JUL | | | | |
| 18... | 1700 | 592 | 610 | 2.0 | 16... | 1100 | 240 | 670 | 21.5 |
| APR | | | | | SEP | | | | |
| 28... | 0949 | 124 | 920 | 18.0 | 03... | 1335 | 65 | 950 | 21.0 |

05544200 - MUKWONAGO RIVER AT MUKWONAGO, WI (LAT 42 51 24 LONG 088 19 40)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | APR , 1986 | | | | |
| 08... | 1050 | 40 | 495 | 12.0 | 23... | 0835 | 69 | 510 | 10.0 |
| NOV | | | | | JUN | | | | |
| 15... | 1052 | 90 | 490 | 3.5 | 19... | 0915 | 40 | 450 | 23.0 |
| DEC | | | | | AUG | | | | |
| 19... | 1325 | 66 | 610 | .5 | 06... | 0810 | 26 | 470 | 23.5 |
| JAN , 1986 | | | | | SEP | | | | |
| 29... | 1030 | 52 | 625 | 1.0 | 17... | 0925 | 26 | 465 | 16.5 |
| MAR | | | | | | | | | |
| 13... | 1250 | 192 | 400 | 1.0 | | | | | |

05546500 - FOX RIVER AT WILMOT, WI (LAT 42 30 40 LONG 088 10 45)

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) | DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) (00061) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | TEMPER-ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|---|---|
| NOV , 1985 | | | | | JUN , 1986 | | | | |
| 14... | 1150 | 1500 | 710 | 5.5 | 18... | 1305 | 503 | 700 | 23.0 |

# GROUND-WATER RECORDS

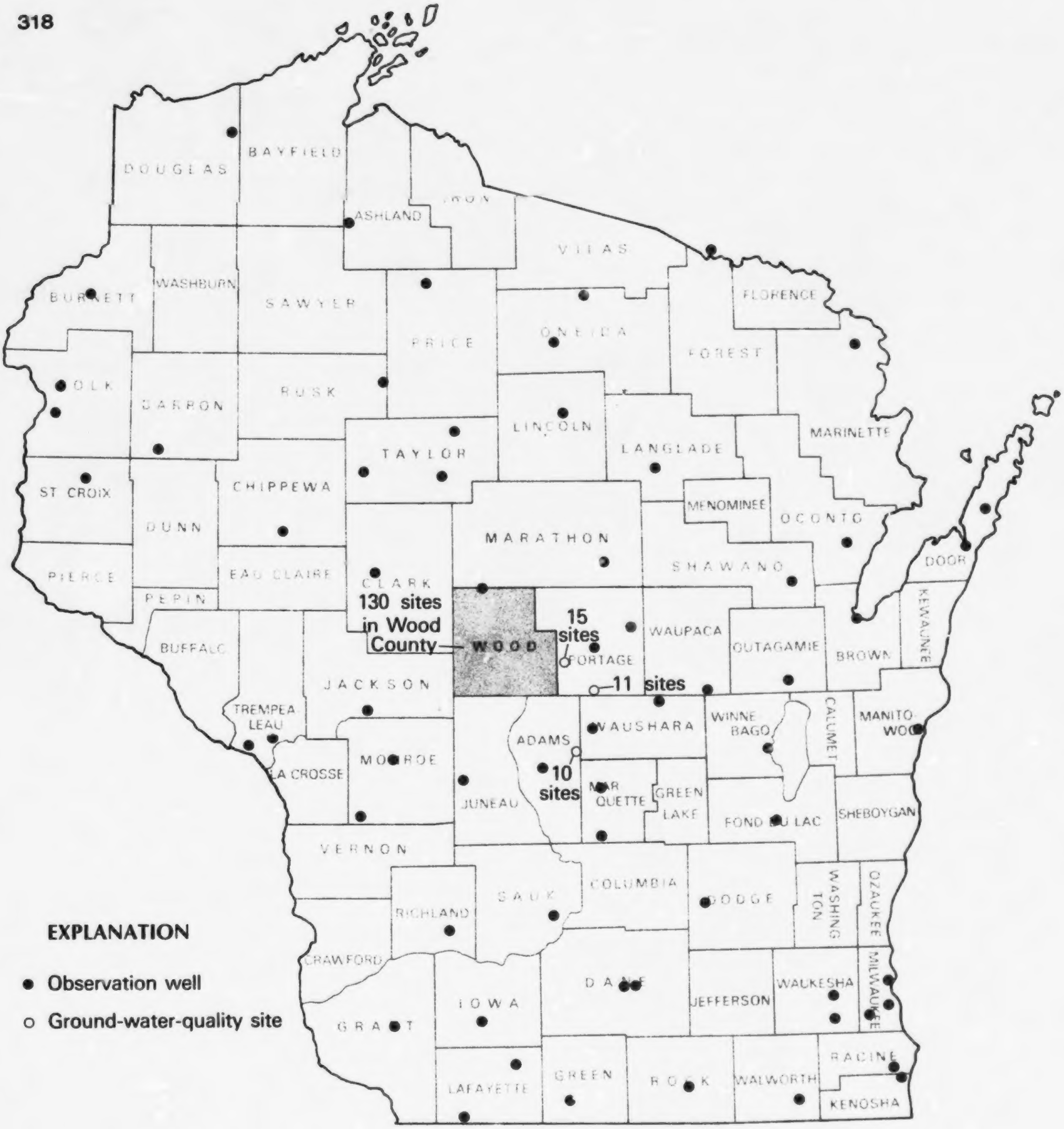

Figure 6. Location of observation wells and ground-water-quality sites in Wisconsin.

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## ADAMS COUNTY

### 435759089490001. Local number, AD-17/06E/08-0076.

LOCATION.--Lat 43°57'59", long 89°49'00", Hydrologic Unit 07070003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in, depth 21 ft, cased to 19 ft, well point 19-21 ft.

DATUM.--Altitude of land-surface is 955 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.61 ft below land-surface datum. May 29, 1973; lowest water level measured, 18.14 ft below land-surface datum, Mar. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 1 | 14.51 | DEC 3 | 14.19 | FEB 4 | 15.32 | APR 7 | 12.90 | JUN 9 | 14.14 | AUG 12 | 13.64 |
| 7 | 14.32 | 9 | 14.04 | 10 | 15.44 | 14 | 12.84 | 16 | 14.04 | 19 | 13.98 |
| 16 | 14.32 | 17 | 13.92 | 17 | 15.54 | 21 | 12.59 | 23 | 14.43 | 27 | 14.30 |
| 23 | 14.34 | 26 | 14.27 | 24 | 15.60 | 28 | 12.87 | 30 | 13.70 | SEP 2 | 14.36 |
| 28 | 14.50 | JAN 2 | 14.74 | MAR 4 | 15.73 | MAY 5 | 13.00 | JUL 7 | 14.05 | 9 | 14.61 |
| NOV 4 | 14.20 | 6 | 14.87 | 10 | 15.62 | 12 | 13.37 | 14 | 13.38 | 15 | 13.89 |
| 11 | 14.12 | 13 | 15.08 | 17 | 14.07 | 19 | 12.75 | 23 | 13.41 | 22 | 13.44 |
| 18 | 13.69 | 21 | 15.10 | 25 | 14.07 | 27 | 13.56 | 28 | 12.74 | 29 | 12.13 |
| 25 | 14.32 | 27 | 15.25 | 31 | 13.39 | JUN 3 | 14.07 | AUG 4 | 13.35 | | |

## ASHLAND COUNTY

### 460936090531701. Local number, AS-43/04W/32-0006.

LOCATION.--Lat 46°09'36", long 90°53'17", Hydrologic Unit 07050001. Owner: U.S. Forest Service.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 89 ft.

DATUM.--Altitude of land-surface datum is 1,470 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of hole in pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.4 ft below land-surface datum, Mar. 24, 1985; lowest water level measured, 32.4 ft below land-surface datum, Apr. 1, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 17 | 24.80 | DEC 26 | 26.50 | FEB 18 | 27.40 | APR 21 | 26.30 | JUN 20 | 26.10 | AUG 20 | 26.80 |
| NOV 20 | 25.80 | JAN 17 | 26.10 | MAR 25 | 26.50 | MAY 30 | 26.10 | JUL 17 | 26.30 | SEP 20 | 26.80 |

## BARRON COUNTY

### 451514091582101. Local number, ER-33/13W/21-0046.

LOCATION.--Lat 45°15'14", long 91°58'21", Hydrologic Unit 07050007. Owner: Edward Thuftin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 65 ft.

DATUM.--Altitude of land-surface is 1,115 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

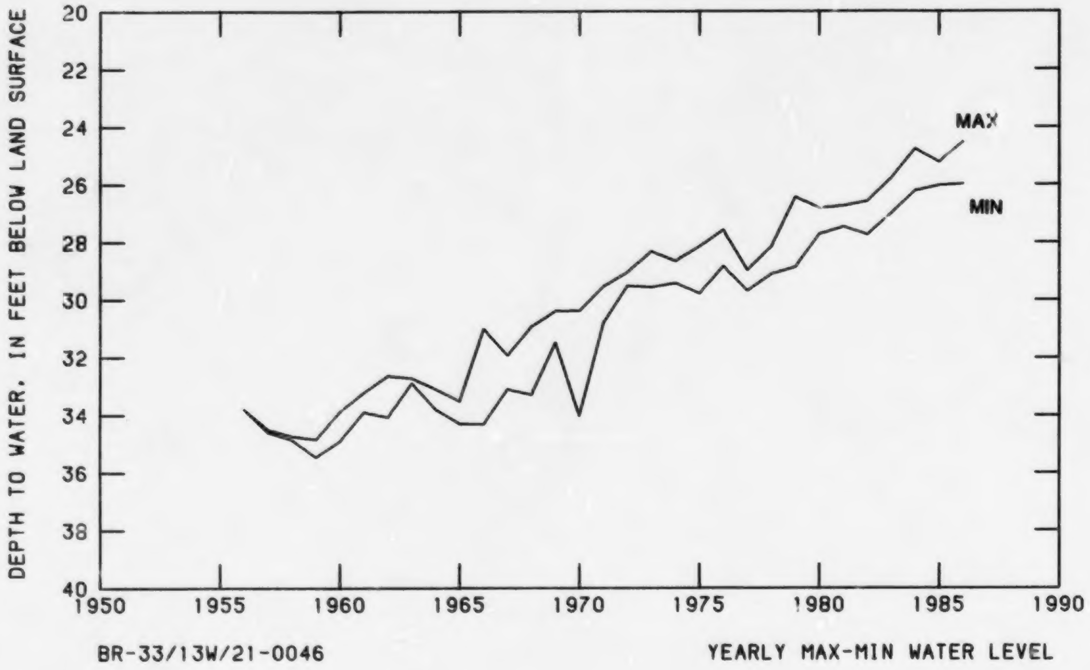
PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.53 ft below land-surface datum, June 11, 1986; lowest water level measured, 35.45 ft below land-surface datum, May 13, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 25.75 | DEC 4 | 25.30 | FEB 14 | 25.68 | APR 10 | 25.46 | JUN 11 | 24.53 | AUG 14 | 24.78 |
| 7 | 25.60 | 20 | 25.44 | 21 | 25.85 | 20 | 24.89 | 24 | 24.80 | 19 | 25.05 |
| 16 | 25.58 | 27 | 25.40 | 25 | 25.74 | 28 | 24.68 | JUL 17 | 24.81 | 26 | 24.95 |
| 25 | 25.40 | JAN 10 | 25.52 | MAR 14 | 25.78 | MAY 15 | 24.67 | 23 | 24.92 | SEP 2 | 24.99 |
| 30 | 25.30 | 16 | 25.39 | 17 | 25.94 | 20 | 24.71 | 30 | 24.85 | 12 | 25.02 |
| NOV 15 | 25.22 | 28 | 25.39 | 24 | 25.97 | JUN 2 | 24.65 | AUG 7 | 24.86 | 16 | 25.10 |
| 25 | 25.30 | FEB 7 | 25.65 | APR 4 | 25.48 | | | | | | |

## BARRON COUNTY



## BROWN COUNTY

443228088003101. Local number, BN-24/20E/24-0076.

LOCATION.--Lat 44°32'28", long 88°00'31", Hydrologic Unit 04030204. Owner: Wisconsin Public Service Corp.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in, depth 500 ft, cased to 150 ft, open end.

DATUM.--Altitude of land-surface is 590 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 3 in pipe, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured. 41.24 ft below land-surface datum, May 3, 1961; lowest water level measured, 248.97 ft below land-surface datum, Aug. 30, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 1 | 87.70 | DEC 3 | 81.30 | JAN 28 | 79.30 | MAR 25 | 77.40 | MAY 28 | 81.19 | JUL 15 | 92.35 |
| 8 | 86.15 | 11 | 80.50 | FEB 5 | 79.50 | APR 8 | 77.60 | JUN 3 | 82.80 | 22 | 93.45 |
| 15 | 85.20 | 17 | 80.50 | 11 | 79.65 | 15 | 78.10 | 10 | 85.80 | AUG 5 | 96.00 |
| 23 | 84.60 | 23 | 79.40 | 19 | 78.75 | 23 | 78.75 | 17 | 87.90 | 12 | 96.55 |
| 29 | 84.60 | 30 | 79.35 | 25 | 79.38 | 29 | 78.22 | 24 | 88.40 | 20 | 96.10 |
| NOV 5 | 84.00 | JAN 7 | 79.60 | MAR 4 | 78.80 | MAY 6 | 79.35 | JUL 1 | 88.50 | SEP 16 | 97.00 |
| 12 | 83.20 | 15 | 79.50 | 18 | 77.30 | 13 | 79.90 | 8 | 88.30 | 23 | 95.60 |
| 26 | 81.55 | 21 | 79.35 | | | | | | | | |

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## BURNETT COUNTY

### 455224092215601. Local number, BT-39/16W/17-0002.

LOCATION.--Lat 45°52'24", long 92°21'56", Hydrologic Unit 07030001. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 46 ft, cased to 46 ft, perforated 44 1/2-46 ft.

DATUM.--Altitude of land-surface is 981 ft above National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.87 ft above land-surface datum.

PERIOD OF RECORD.--May 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.33 ft below land-surface datum, June 28, 1968; lowest water level measured, 37.32 ft below land-surface datum, Mar. 3, 1938.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 4 | 32.21 | NOV 29 | 32.15 | JAN 24 | 32.06 | MAR 21 | 32.37 | JUN 20 | 31.88 | AUG 15 | 31.76 |
| 11 | 32.31 | DEC 6 | 32.20 | 31 | 32.17 | 28 | 32.19 | 27 | 31.84 | 22 | 31.83 |
| 18 | 32.22 | 13 | 32.14 | FEB 7 | 32.21 | APR 4 | 32.25 | JUL 4 | 31.94 | 29 | 31.79 |
| 25 | 32.21 | 20 | 32.29 | 14 | 32.16 | 11 | 32.25 | 11 | 31.84 | SEP 5 | 31.72 |
| NOV 1 | 32.12 | 27 | 32.06 | 21 | 32.29 | 18 | 32.28 | 18 | 31.86 | 12 | 31.70 |
| 8 | 32.15 | JAN 3 | 32.25 | 28 | 32.18 | 25 | 32.17 | 25 | 31.82 | 19 | 31.73 |
| 15 | 32.24 | 10 | 32.10 | MAR 7 | 32.19 | JUN 6 | 31.78 | AUG 1 | 31.96 | 26 | 31.64 |
| 22 | 32.20 | 17 | 32.07 | 14 | 32.19 | 13 | 31.86 | 8 | 32.12 | | |

## CHIPPEWA COUNTY

### 445544091155701. Local number, CH-28/07W/17-0142.

LOCATION.--Lat 44°55'44", long 91°15'57", Hydrologic Unit 07050005. Owner Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 60 ft, cased to 39 ft, open end.

DATUM.--Altitude of land-surface is 965 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.36 ft below land-surface datum, May 21, 1984; lowest water level measured, 33.46 ft below land-surface datum, Jan. 10, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 8 | 28.00 | DEC 10 | 28.29 | FEB 10 | 28.91 | APR 14 | 28.14 | JUN 19 | 28.43 | AUG 12 | 27.96 |
| 14 | 28.21 | 16 | 28.42 | 17 | 28.43 | 21 | 28.21 | 23 | 28.41 | 18 | 27.93 |
| 21 | 28.31 | 23 | 27.68 | 25 | 28.83 | 28 | 27.80 | 30 | 28.26 | 26 | 27.56 |
| 28 | 28.60 | 30 | 28.11 | MAR 5 | 28.52 | MAY 5 | 27.69 | JUL 7 | 27.82 | SEP 2 | 27.74 |
| NOV 5 | 28.39 | JAN 6 | 28.83 | 10 | 28.56 | 12 | 28.15 | 15 | 28.09 | 8 | 27.76 |
| 11 | 28.73 | 14 | 28.67 | 17 | 29.07 | 19 | 28.34 | 22 | 28.07 | 14 | 27.80 |
| 18 | 28.07 | 22 | 28.48 | 24 | 29.18 | 26 | 28.20 | 29 | 27.77 | 22 | 27.29 |
| 26 | 28.92 | 27 | 28.62 | 31 | 28.44 | JUN 2 | 28.44 | AUG 5 | 27.78 | 26 | 26.83 |
| DEC 2 | 28.54 | FEB 3 | 28.64 | APR 7 | 28.43 | 9 | 28.45 | | | | |

## CLARK COUNTY

### 444525090443201. Local number, CK-26/03W/04-0001.

LOCATION.--Lat 44°45'25", long 90°44'32", Hydrologic Unit 07050006. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 150 ft cased to 53 ft, open end.

DATUM.--Altitude of land-surface is 1,210 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum .

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.30 ft below land-surface datum Aug. 23, 1984; lowest water level measured, 70.64 ft below land-surface datum, Sept. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 10 | 54.10 | MAR 25 | 54.50 | MAY 30 | 53.64 | JUL 31 | 54.00 | AUG 29 | 53.66 | SEP 30 | 52.79 |
| JAN 30 | 55.08 | MAY 1 | 53.63 | JUN 18 | 54.03 | | | | | | |

## DANE COUNTY

### 430429089230301. Local number, DN-07/09E/23-0005.

LOCATION.--Lat 43°04'29", long 89°23'03", Hydrologic Unit 07090001. Owner: State of Wisconsin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 346 ft, cased to 265 ft, open end.

DATUM.--Altitude of land-surface is 930 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 3.50 ft below land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 83.37 ft below land-surface datum, Jan. 2, 1961; lowest water level measured, 120.50 ft below land-surface datum, Nov. 6, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 7 | 108.50 | DEC 2 | 101.80 | FEB 3 | 107.00 | APR 7 | 107.75 | JUN 2 | 108.50 | AUG 4 | 115.30 |
| 14 | 109.60 | 11 | 118.85 | 10 | 114.00 | 14 | 117.00 | 9 | 110.10 | 11 | 109.90 |
| 21 | 108.20 | 16 | 111.80 | 17 | 106.50 | 21 | 105.80 | 16 | 106.60 | 18 | 115.50 |
| 26 | 106.30 | 23 | 106.50 | 24 | 108.50 | 28 | 110.50 | 23 | 109.90 | 25 | 118.30 |
| NOV 6 | 120.50 | JAN 6 | 105.00 | MAR 3 | 109.50 | MAY 5 | 110.80 | 30 | 113.20 | SEP 2 | 113.10 |
| 11 | 110.65 | 13 | 109.70 | 10 | 113.10 | 12 | 109.80 | JUL 7 | 113.80 | 8 | 110.20 |
| 18 | 107.40 | 21 | 109.20 | 17 | 107.50 | 19 | 112.30 | 14 | 114.85 | 15 | 118.80 |
| 27 | 117.50 | 27 | 109.50 | 31 | 105.50 | 27 | 111.50 | 21 | 116.10 | 22 | 111.30 |
|  |  |  |  |  |  |  |  | 28 | 114.00 | 29 | 107.90 |

### 430456089190601. Local number, DN-07/10E/09-0105.

LOCATION.--Lat 43°04'56", long 89°19'06", Hydrologic Unit 07070005. Owner: City of Madison.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 380 ft, cased to 85 ft, open end.

DATUM.--Altitude of land-surface is 870 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land- surface datum.

PERIOD OF RECORD.--September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.63 ft below land-surface datum, Mar. 23, 1986; lowest water level measured, 32.76 ft below land-surface datum, June 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 23.31 | 21.79 | 21.55 | 21.47 | 22.56 | 22.23 | 20.63 | 21.41 | 23.18 | 22.70 | 23.64 | 23.78 |
| 10 | 23.70 | 21.80 | 21.69 | 21.47 | 22.06 | 21.80 | 21.41 | 21.88 | 23.99 | 22.73 | 22.80 | 23.04 |
| 15 | 23.15 | 21.70 | 21.55 | 22.17 | 22.30 | 21.23 | 21.17 | 21.64 | 21.91 | 23.08 | 23.81 | 22.54 |
| 20 | 23.11 | 21.35 | 21.21 | 22.35 | 22.53 | 20.52 | 21.00 | 21.58 | 23.58 | 23.02 | 23.39 | 23.15 |
| 25 | 22.76 | 21.14 | 21.49 | 22.19 | 22.45 | 20.20 | 21.36 | 21.52 | 21.85 | 23.31 | 23.64 | 22.14 |
| EOM | 22.66 | 21.12 | 21.47 | 22.47 | 22.47 | 20.63 | 21.32 | 22.43 | 21.53 | 23.46 | 22.69 | 21.78 |

WTR YEAR 1986 MAX 24.48 JUL 19 MIN 19.36 MAR 23

## DODGE COUNTY

### 432407088552701. Local number, DG-11/13E/23-0081.

LOCATION.--Lat 43°24'15", long 88°55'26", Hydrologic Unit 07090002. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 125 ft, cased to 57 ft, open end.

DATUM.--Altitude of land-surface is 880 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in side of casing, 1.30 ft above land-suface datum.

PERIOD OF RECORD.--November 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.07 ft below land-surface datum, Mar. 27, 1986; lowest water level measured, 26.67 ft below land-surface datum, Feb. 3, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 29 | 17.25 | JAN 31 | 18.40 | APR 3 | 16.90 | MAY 30 | 19.25 | AUG 27 | 19.08 | SEP 18 | 17.26 |
| DEC 30 | 17.83 | FEB 28 | 17.79 | 30 | 18.20 | JUN 27 | 19.55 | 28 | 18.72 | 30 | 15.94 |
| JAN 10 | 17.87 | MAR 27 | 16.07 | MAY 14 | 18.66 | JUL 31 | 19.36 |  |  |  |  |

## DOOR COUNTY

### 455757087151701. Local number, DR-29/27E/30-0007.

LOCATION.--Lat 45°57'57", long 87°15'17", Hydrologic Unit 04030102. Owner: Fred Peterson.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in, depth 111 ft.

DATUM.--Altitude of land-surface is 725 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.00 ft below land-surface datum, Mar. 22, 1979; lowest water level measured, 56.12 ft below land-surface datum, Feb. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 16 | 29.49 | JAN 21 | 30.20 | MAR 18 | 17.26 | MAY 21 | 37.97 | JUL 21 | 46.26 | SEP 10 | 46.23 |
| DEC 18 | 39.68 | FEB 19 | 43.16 | | | | | | | | |

### 445055087213801. Local number, DR-27/26E/05-0265

LOCATION.--Lat 44°50'55", long 87°21'38", Hydrologic Unit 04030102. Owner: U.S. Geol. Survey.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled observation, diameter 6 in, depth 442 ft, cased to 170 ft, open end.

DATUM.--Altitude of land-surface is 616 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.57 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--September 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.57 ft above land-surface datum, June 18, 1974; lowest water level, 35.33 ft below land-surface datum, Feb. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 11.00 | 4.41 | 8.26 | 12.61 | 18.79 | 21.39 | | | 14.72 | 19.26 | 22.12 | 25.54 |
| 10 | 8.23 | 4.72 | 8.22 | 13.91 | 19.80 | 21.43 | | | 14.71 | 19.17 | 22.22 | 25.60 |
| 15 | 7.91 | 5.50 | 8.28 | 14.83 | 20.77 | 18.48 | | | 14.35 | 20.19 | 23.37 | 25.08 |
| 20 | 9.13 | 4.51 | 9.73 | 14.83 | 20.59 | 7.52 | | | 19.71 | 19.94 | 24.08 | 24.34 |
| 25 | 11.54 | 5.72 | 10.31 | 15.15 | 20.57 | 3.78 | | 11.00 | 20.48 | 21.84 | 24.17 | 22.81 |
| EOM | 12.17 | 5.21 | 11.14 | 18.84 | 21.36 | | | 13.25 | 19.63 | 21.77 | 24.74 | 19.15 |

WTR YEAR 1986 MAX 26.95 SEP 9 MIN +1.43 MAR 28

## DOUGLAS COUNTY

### 463217091342801. Local number, DS-47/10W/23-0001.

LOCATION.--Lat 46°32'17", long 91°34'28", Hydrologic Unit 04010301. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 40 ft, cased to 40 ft, perforated 37-40 ft.

DATUM.--Altitude of land-surface is 980 ft above National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.33 ft above land-surface datum.

PERIOD OF RECORD.--June 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft above land-surface datum, Apr. 28, 1978; lowest water level measured, 29.59 ft below land-surface datum, July 29. 1939.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 7 | 0.54 | DEC 3 | 1.63 | JAN 27 | 2.72 | MAR 24 | 5.37 | MAY 19 | 0.52 | JUL 14 | 3.98 |
| 15 | 0.16 | 9 | 1.44 | FEB 3 | 2.97 | APR 1 | 0.12 | 28 | 1.60 | 28 | 2.07 |
| 21 | 0.92 | 16 | 1.49 | 10 | 3.35 | 8 | 0.04 | JUN 2 | 2.09 | AUG 11 | 2.05 |
| 28 | 1.50 | 23 | 1.61 | 19 | 3.88 | 14 | 0.41 | 9 | 1.90 | 19 | 1.69 |
| NOV 4 | 1.21 | 30 | 1.99 | 25 | 4.23 | 21 | 0.50 | 16 | 1.70 | 25 | 0.83 |
| 12 | 1.56 | JAN 7 | 2.36 | MAR 3 | 4.79 | 28 | 0.32 | 23 | 2.35 | SEP 8 | 1.44 |
| 18 | 1.59 | 13 | 2.43 | 10 | 5.10 | MAY 5 | 0.54 | 30 | 2.81 | 15 | 1.75 |
| 25 | 1.61 | 21 | 2.57 | 19 | 5.43 | 12 | 0.22 | JUL 7 | 3.39 | 22 | +0.21 |
| | | | | | | | | | | 29 | 0.59 |

## FOND DU LAC COUNTY

434358088301001. Local number. FL-15/17E/30-0374.

LOCATION.--Lat 43°43'58", long 88°30'46", Hydrologic Unit 04030203. Owner: Wis. Dept. of Transportation.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 120 ft, cased to 63 ft, open end.

DATUM.--Altitude of land-surface is 835 ft above National Geodetic Vertical Datum of 1928. Measuring point: hole in pump base, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--October 16, 1967, to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.05 ft below land-surface datum, Apr. 11, 1986; lowest water level measured, 34.99 ft below land-surface datum, Mar. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 26 | 16.68 | FEB 13 | 13.56 | APR 3 | 11.32 | MAY 23 | 13.91 | JUL 27 | 16.33 | AUG 22 | 16.84 |
| JAN 10 | 13.17 | 19 | 13.52 | 11 | 11.05 | JUN 12 | 15.45 | AUG 6 | 16.19 | SEP 10 | 18.17 |
| 16 | 13.95 | MAR 18 | 13.04 | MAY 14 | 12.55 | JUL 1 | 15.24 | 14 | 16.58 | 26 | 14.60 |
| FEB 3 | 13.87 | 26 | 11.55 | 16 | 13.02 | | | | | | |

## FOREST COUNTY

460156088474901. Local number, FR-41/14E/18-0002.

LOCATION.--Lat 46°01'56", long 88°47'49", Hydrologic Unit 04030106. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 18 ft, cased to 15 ft, well point 15-18 ft.

DATUM.--Land-surface datum is 1,552 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.70 ft above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.96 ft below land-surface datum, Apr. 29, 1954; lowest water level measured, 11.89 ft below land-surface datum, Aug. 13, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 10.50 | NOV 26 | 10.53 | JAN 30 | 10.23 | APR 29 | 10.18 | JUL 2 | 11.45 | AUG 28 | 11.32 |
| 30 | 10.67 | DEC 31 | 10.42 | FEB 26 | 10.18 | MAY 29 | 11.17 | 30 | 11.41 | | |

## GRANT COUNTY

425551090391301. Local number, GR-05/02W/06-0005.

LOCATION.--Lat 42°55'51", long 90°39'13", Hydrologic Unit 07060003. Owner: Ralph Shackelford.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 35 ft, cased to 5 ft, open end.

DATUM.--Altitude of land-surface is 980 ft above National Geodetic Vertical Datum of 1929. Measuring point: edge of pump base, 0.50 ft above land-surface datum.

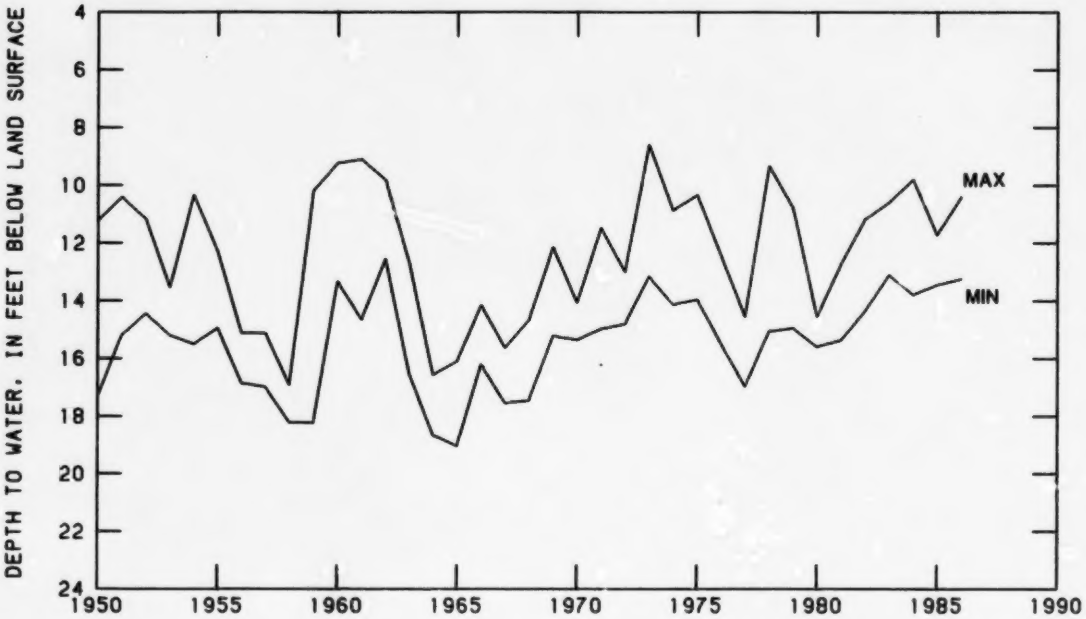
PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft below land-surface datum, May 22, 1973; lowest water level measured, 19.03 ft below land-surface datum, Aug. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 30 | 13.45 | DEC 19 | 12.73 | FEB 25 | 13.24 | APR 16 | 10.42 | JUN 25 | 11.86 | AUG 27 | 12.78 |
| NOV 26 | 12.55 | JAN 21 | 12.94 | MAR 25 | 10.54 | MAY 16 | 10.89 | JUL 22 | 12.52 | SEP 22 | 13.21 |

GRANT COUNTY



GR-05/02W/06-0005 YEARLY MAX-MIN WATER LEVEL

GREEN COUNTY

423815089404201. Local number, GN-02/07E/21-0001.

LOCATION.--Lat 42°38'15", long 89°40'12", Hydrologic Unit 07090003. Owner: Charles Segner.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 75 ft.

DATUM.--Altitude of land-surface is 995 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.96 ft below land-surface datum, Apr. 13, 1966; lowest water level measured, 69.72 ft below land-surface datum, Feb. 17, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

No measurements made in the 1986 water year.

IOWA COUNTY

425644090101901. Local number, IW-06/03E/32-0032.

LOCATION.--Lat 42°56'44", long 90°10'19", Hydrologic Unit 07090003. Owner: Archie Lee.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth 92 ft.

DATUM.--Altitude of land-surface is 1,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.40 ft below land-surface datum, May 17, 1960; lowest water level measured, 68.81 ft below land-surface datum, Aug. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 16 | 57.54 | DEC 10 | 55.46 | FEB 19 | 56.47 | MAY 8 | 53.52 | JUN 5 | 55.47 | AUG 7 | 57.30 |
| 29 | 56.99 | 20 | 53.45 | MAR 13 | 56.36 | 22 | 54.55 | JUL 9 | 56.69 | SEP 10 | 55.26 |
| NOV 13 | 57.36 | JAN 15 | 55.29 | APR 10 | 48.29 | JUN 3 | 55.42 | 18 | 57.05 | 18 | 58.01 |
| 29 | 51.61 | 30 | 56.31 | 23 | 50.51 | | | | | | |

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## JACKSON COUNTY

441051090470901. Local number, JA-20/03W/30-0005.

LOCATION.--Lat 44°10'51", long 90°47'09", Hydrologic Unit 07040007. Owner: Robert Foulker.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 190 ft, cased to 54 ft, open end.

DATUM.--Altitude of land-surface is 845 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--June 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.53 ft below land-surface datum, May 22, 1973; lowest water level measured, 22.60 ft below land-surface datum, Dec. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 7 | 19.90 | MAR 21 | 19.55 | MAY 6 | 18.59 | JUN 17 | 18.61 | AUG 13 | 19.59 | SEP 8 | 18.60 |
| NOV 19 | 19.59 | APR 17 | 19.51 | JUN 5 | 18.95 | JUL 9 | 19.59 | 19 | 19.49 | 25 | 18.31 |

## JUNEAU COUNTY

435515090152901. Local number, JU-17/02E/28-0098.

LOCATION.--Lat 43°55'15", long 90°15'29", Hydrologic Unit 07070003. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 71 ft, cased to 42 ft, open end.

DATUM.--Altitude of land-surface is 930 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.86 ft below land-surface datum, May 24, 1973; lowest water level measured, 13.90 ft below land-surface datum, Jan. 10, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 30 | 11.00 | FEB 28 | 11.38 | APR 28 | 10.79 | JUN 5 | 11.22 | JUL 28 | 11.23 | AUG 29 | 11.42 |
| JAN 30 | 11.11 | MAR 30 | 10.60 | MAY 30 | 11.20 | 18 | 11.34 | AUG 19 | 11.29 | SEP 24 | 10.56 |

## KENOSHA COUNTY

423907087521701. Local number, KE-02/22E/11-0006.

LOCATION.--Lat 42°39'07", long 87°52'17", Hydrologic Unit 04040002. Owner: Kenosha County.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 1,751 ft, cased to 492 ft, open end.

DATUM.--Altitude of land-surface is 639 ft above National Geodetic Vertical Datum of 1929. Measuring point: end of 3/4-in. plastic pipe, 4.25 ft above land-surface datum.

REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.10 ft below land-surface datum, Dec. 3, 1947; lowest water level measured, 198.85 ft below land-surface datum, Aug. 14, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|
| MAY 1 | 197.28 | MAY 14 | 197.70 | JUN 18 | 198.20 | JUL 8 | 198.27 | AUG 14 | 198.85 |

## LAFAYETTE COUNTY

### 423114090161101. Local number, LF-01/02E/33-0057.

LOCATION.--Lat 42°31'13", long 90°16'11", Hydrologic Unit 07060005. Owner: Coulthard Estate.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 265 ft, cased to 16 ft, open end.

DATUM.--Altitude of land-surface is 1,000 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.34 ft below land-surface datum, Apr. 29, 1986; lowest water level, 130.99 ft below land-surface datum, Nov. 6, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 38.13 | 38.73 | 35.46 | 35.98 | 36.74 | 36.53 | | 30.89 | 30.80 | 29.95 | 30.77 | 32.24 |
| 10 | 38.52 | 38.74 | 35.47 | 36.32 | 36.88 | 36.10 | | 31.66 | 30.74 | 30.10 | 31.03 | 32.30 |
| 15 | 38.54 | 38.47 | 35.40 | 36.40 | 36.67 | 32.66 | | 31.72 | 30.90 | 30.15 | 31.04 | 32.47 |
| 20 | 38.78 | 37.56 | 35.70 | 36.25 | 36.65 | 30.55 | | 31.96 | 30.27 | 30.24 | 31.60 | 32.44 |
| 25 | 38.96 | 36.32 | 35.71 | 36.41 | 36.81 | 28.70 | 30.42 | 31.35 | 30.09 | 30.31 | 31.60 | 30.28 |
| EOM | 38.72 | 35.53 | 35.82 | 36.85 | 36.89 | | 30.83 | 30.86 | 29.83 | 30.55 | 32.10 | |

WTR YEAR 1986 MAX 39.08 OCT 28 MIN 28.34 APR 29

### 424620089590001. Local number, LF-04/04E/35-0078.

LOCATION.--Lat 42°46'20", long 89°58'57", Hydrologic Unit 07090003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 3/4 in, depth 29 ft, cased to 16 ft, open end.

DATUM.--Altitude of land-surface is 850 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.89 ft below land-surface datum, May 23, 1974; lowest water level measured, 19.81 ft below land-surface datum, Mar. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 29 | 15.19 | DEC 20 | 13.45 | FEB 19 | 13.55 | APR 23 | 11.66 | JUN 5 | 12.83 | AUG 5 | 14.56 |
| NOV 29 | 11.67 | JAN 30 | 14.80 | MAR 11 | 9.70 | MAY 22 | 12.31 | JUL 18 | 14.10 | SEP 18 | 14.78 |

## LANGLADE COUNTY

### 450942089085301. Local number, LA-31/11E/20-0118.

LOCATION.--Lat 45°09'42", long 89°08'53", Hydrologic Unit 07070002. Owner: Wis. Public Service Corp.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/2 in, depth 21 ft, cased to 19 ft, well point 19-21 ft.

DATUM.--Land-surface datum is 1,510 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.09 ft below land-surface datum, May 18, 1973; lowest water level measured, 13.84 ft below land-surface datum, Feb. 28, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 29 | 7.34 | DEC 27 | 7.96 | FEB 28 | 9.65 | APR 28 | 7.21 | JUL 28 | 9.08 | SEP 29 | 9.27 |
| NOV 27 | 6.70 | JAN 27 | 8.93 | MAR 27 | 9.10 | MAY 27 | 8.12 | AUG 29 | 9.60 | | |

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## LINCOLN COUNTY

452318089402501. Local number, LN-34/06E/36-0060.

LOCATION.--Lat 45°23'18", long 89°40'25", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 22 ft, cased to 20 ft, well point 20-22 ft.

DATUM.--Altitude of land-surface is 1,435 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.79 ft below land-surface datum, Oct. 9, 1985; lowest water level measured, 10.38 ft below land-surface datum, Jan. 17, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 6.55 | JAN 2 | 8.00 | MAR 3 | 8.06 | APR 30 | 7.20 | JUN 25 | 7.80 | AUG 14 | 7.88 |
| 9 | 5.79 | 7 | 8.18 | 11 | 8.18 | MAY 6 | 7.57 | JUL 1 | 7.27 | 19 | 8.03 |
| NOV 19 | 7.27 | 13 | 8.10 | 19 | 8.28 | 15 | 7.57 | 10 | 8.00 | 26 | 8.18 |
| 25 | 7.47 | 20 | 8.20 | 25 | 8.29 | 24 | 7.80 | 17 | 7.70 | SEP 4 | 8.28 |
| DEC 4 | 7.57 | 27 | 8.30 | APR 3 | 6.60 | 28 | 7.90 | 25 | 7.17 | 11 | 8.17 |
| 11 | 7.67 | FEB 8 | 8.48 | 11 | 6.86 | JUN 5 | 8.30 | AUG 1 | 7.60 | 16 | 8.00 |
| 20 | 7.67 | 20 | 8.48 | 18 | 7.09 | 12 | 8.38 | 6 | 7.79 | 21 | 7.87 |
| 26 | 7.69 | 25 | 8.06 | 24 | 7.37 | 19 | 7.17 | | | | |

## MANITOWOC COUNTY

440430087420401. Local number, MN-19/23E/35-0028.

LOCATION.--Lat 44°04'30", long 87°42'04", Hydrologic Unit 04030101. Owner: Wis. Dept. of Transportation.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 147 ft, cased to 133 ft, open end.

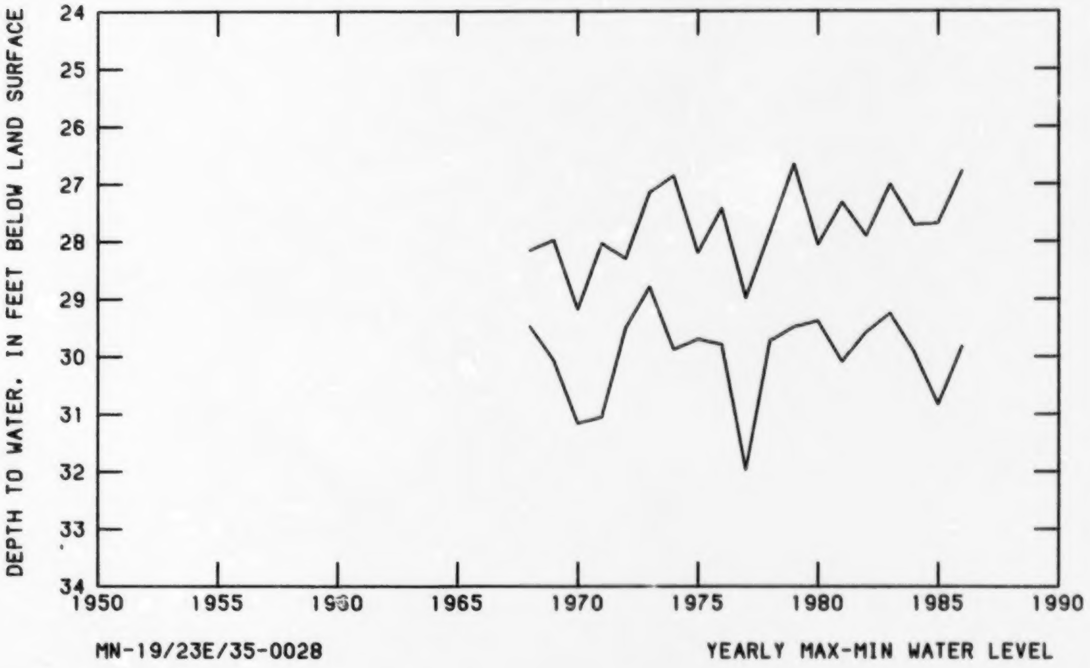
DATUM.--Altitude of land-surface is 670 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.66 ft below land-surface datum, June 11, 1979; lowest water level measured, 31.97 ft below land-surface datum, Jan. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 3 | 29.36 | APR 2 | 26.78 | JUN 4 | 29.78 | JUL 7 | 29.50 | JUL 28 | 29.25 | SEP 8 | 29.25 |
| DEC 17 | 27.80 | MAY 12 | 28.50 | 9 | 29.83 | 14 | 29.34 | AUG 4 | 28.83 | 15 | 28.42 |
| JAN 23 | 27.76 | 19 | 28.67 | 16 | 29.50 | 21 | 29.50 | 11 | 29.25 | 22 | 27.75 |
| FEB 26 | 28.79 | 28 | 29.44 | 23 | 29.50 | 23 | 29.39 | 18 | 29.00 | 27 | 27.75 |



## MARATHON COUNTY

### 444114090082501. Local number, MR-26/03E/33-0007.

LOCATION.--Lat 44°41'14", long 90°08'25", Hydrologic Unit 07070002. Owner: City of Marshfield.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 7 in, depth 49 ft, cased to 30 ft, screened 30-49 ft.

DATUM.--Altitude of land-surface is 1,190 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--June 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.16 ft below land-surface datum, Nov. 12, 1982; lowest water level, 38.96 ft below land-surface datum, Jan. 9, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 3.53 | 3.38 | | | | | 4.30 | | 7.31 | 7.33 | 4.73 | 7.06 |
| 10 | 3.96 | 4.51 | | | 8.00 | 6.80 | 5.07 | 6.55 | 7.46 | 7.56 | 5.30 | 6.02 |
| 15 | 4.26 | 4.50 | | 8.60 | | | 4.25 | 6.60 | 7.67 | 6.99 | 4.35 | 4.18 |
| 20 | 5.20 | 3.63 | | 8.60 | | | 5.49 | 6.61 | 7.53 | 2.40 | 6.16 | 3.07 |
| 25 | 4.88 | 4.40 | | | | | 6.45 | 6.80 | 7.99 | 2.75 | 6.62 | 3.38 |
| EOM | 5.96 | 5.29 | | | | 3.71 | | 6.95 | 7.18 | | 6.80 | 3.40 |

WTR YEAR 1986 MAX 11.00 MAR 3 MIN 1.40 JUL 28

### 444709089265301. Local number, MR-27/09E/31-0028.

LOCATION.--Lat 44°47'09", long 89°26'53", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 27 ft, cased to 25 ft, well point 25-27 ft.

DATUM.--Altitude of land-surface is 1,229 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 0.80 ft above land- surface datum.

PERIOD OF RECORD.--November 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.77 ft below land-surface datum, July 21, 1973; lowest water level measured, 26.09 ft below land-surface datum, Mar. 30, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 6 | 16.17 | DEC 8 | 14.95 | FEB 16 | 15.16 | APR 20 | 14.33 | JUN 15 | 14.54 | AUG 10 | 14.96 |
| 13 | 16.09 | 15 | 14.95 | 23 | 15.16 | 27 | 14.23 | 22 | 14.60 | 17 | 14.99 |
| 20 | 16.00 | 22 | 14.78 | MAR 2 | 15.32 | MAY 4 | 14.24 | 29 | 14.67 | 24 | 15.00 |
| 27 | 15.94 | 29 | 14.73 | 9 | 15.33 | 11 | 14.27 | JUL 6 | 14.75 | 31 | 15.09 |
| NOV 3 | 15.75 | JAN 5 | 14.73 | 16 | 15.38 | 18 | 14.30 | 13 | 14.80 | SEP 7 | 15.14 |
| 10 | 15.59 | 19 | 14.68 | 24 | 15.39 | 25 | 14.35 | 19 | 14.81 | 14 | 15.17 |
| 17 | 15.44 | 26 | 14.70 | 30 | 14.52 | JUN 1 | 14.46 | 27 | 14.85 | 21 | 14.99 |
| 24 | 15.25 | FEB 2 | 15.08 | APR 6 | 14.48 | 8 | 14.50 | AUG 3 | 14.91 | 28 | 14.54 |
| DEC 1 | 15.10 | 9 | 15.08 | 13 | 14.37 | | | | | | |

## MARINETTE COUNTY

### 453816087590101. Local number, MT-37/20E/34-0007.

LOCATION.--Lat 45°38'16", long 87°59'01", Hydrologic Unit 04030108. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 33 ft, cased to 33 ft, open end.

DATUM.--Altitude of land-surface is 980 ft above National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.00 ft above land-surface datum.

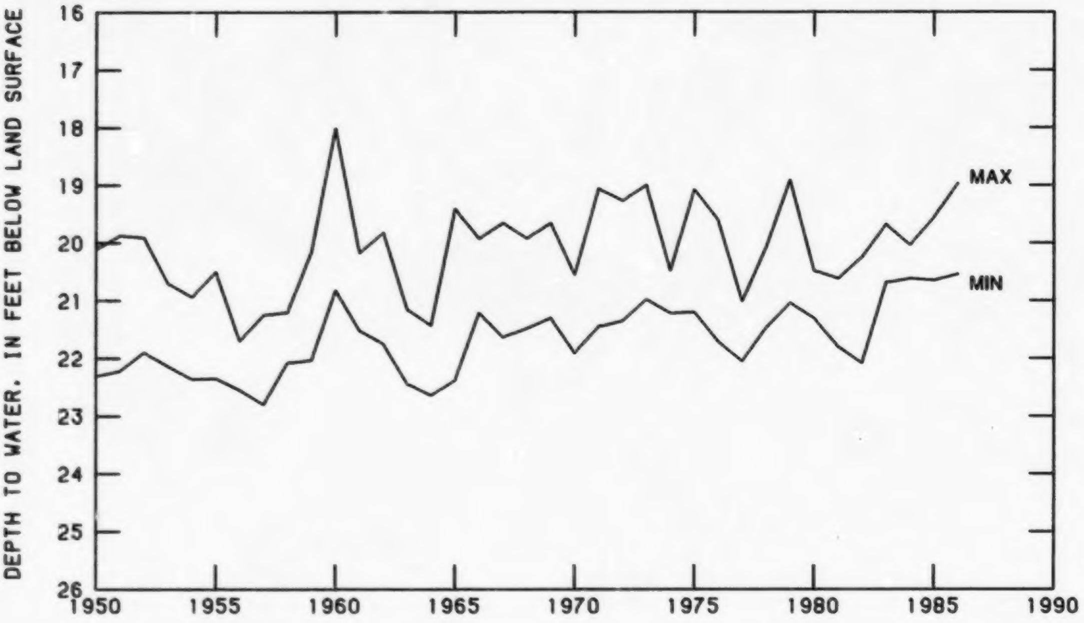
PERIOD OF RECORD.--March 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.01 ft below land-surface datum, May 17, 1960; lowest water level measured, 23.26 ft below land-surface datum, Nov. 2, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 1 | 20.48 | DEC 3 | 19.60 | FEB 4 | 20.12 | APR 8 | 19.38 | JUN 10 | 19.83 | AUG 12 | 20.45 |
| 8 | 20.48 | 10 | 19.56 | 11 | 20.16 | 15 | 19.01 | 17 | 19.90 | 19 | 20.49 |
| 15 | 19.94 | 17 | 19.61 | 18 | 20.22 | 22 | 18.97 | 24 | 20.02 | 26 | 20.54 |
| 22 | 19.96 | 24 | 19.73 | 25 | 20.28 | 29 | 19.08 | JUL 1 | 20.02 | SEP 2 | 20.58 |
| 29 | 20.04 | 31 | 19.78 | MAR 4 | 20.34 | MAY 6 | 19.25 | 8 | 20.12 | 9 | 20.61 |
| NOV 5 | 19.82 | JAN 7 | 19.90 | 11 | 20.39 | 13 | 19.33 | 15 | 20.21 | 16 | 20.62 |
| 12 | 19.62 | 14 | 19.92 | 18 | 20.43 | 20 | 19.43 | 22 | 20.25 | 23 | 20.61 |
| 19 | 19.62 | 21 | 19.99 | 25 | 20.32 | 27 | 19.58 | 29 | 20.35 | 30 | 20.54 |
| 26 | 19.56 | 28 | 20.05 | APR 1 | 19.92 | JUN 3 | 19.68 | AUG 5 | 20.40 | | |

MARINETTE COUNTY



MT-37/20E/34-0007 YEARLY MAX-MIN WATER LEVEL

## MARQUETTE COUNTY

435244089293401. Local number, MQ-16/08E/12-0009.

LOCATION.--Lat 43°52'44", long 89°29'34", Hydrologic Unit 04030201. Owner: Village of Westfield.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth 274 ft.

DATUM.--Altitude of land-surface is 880 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.12 ft below land-surface datum, Feb. 24, 1986; lowest water level measured, 18.21 ft below land-surface datum, Feb. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 3 | 14.02 | DEC 23 | 13.70 | FEB 24 | 13.12 | APR 24 | 13.27 | JUL 8 | 13.74 | AUG 7 | 13.70 |
| 22 | 14.10 | JAN 22 | 13.88 | MAR 24 | 13.41 | MAY 22 | 13.19 | 17 | 13.66 | SEP 9 | 13.98 |
| NOV 25 | 13.52 | | | | | | | | | | |

433956089275601. Local number, MQ-14/09E/30-0026.

LOCATION.--Lat 43°39'56", long 89°27'56", Hydrologic Unit 04030201. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 170 ft, cased to 145 ft, open end.

DATUM.--Altitude of land-surface is 800 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in. hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.80 ft below land-surface datum, Apr. 2, 1973; lowest water level measured, 19.22 ft below land-surface datum, Feb. 22, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 3 | 15.87 | DEC 23 | 14.80 | MAR 24 | 14.02 | JUN 4 | 15.52 | JUL 8 | 15.92 | AUG 7 | 16.40 |
| 22 | 15.87 | JAN 22 | 15.17 | APR 24 | 14.54 | 12 | 15.62 | 17 | 15.93 | SEP 9 | 17.15 |
| NOV 25 | 14.42 | FEB 24 | 15.50 | MAY 22 | 15.07 | | | | | | |

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## MILWAUKEE COUNTY

### 425819087551201. Local number, ML-06/22E/20-0085.

LOCATION.--Lat 42°58'19", long 87°55'12", Hydrologic Unit 04040003. Owner: City of Milwaukee.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 16 in, depth 1,834 ft, cased to 705 ft, open end.

DATUM.--Altitude of land-surface is 705 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in cover on casing, 6.00 ft below land-surface datum.

PERIOD OF RECORD.--Water years 1938, 1944, 1946, 1950, 1952, 1961, 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 110.00 ft below land-surface datum, 1938; lowest water level, 288.29 ft below land-surface datum, Oct. 14, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 285.60 | 284.47 | 282.79 | 281.47 | 281.85 | 282.18 | 283.11 | 282.56 | 283.55 | 284.71 | 286.60 | 286.57 |
| 10 | 285.69 | 284.53 | 282.95 | 281.75 | 281.86 | 282.30 | 283.11 | 282.88 | 283.82 | 284.80 | 286.37 | 286.55 |
| 15 | 285.42 | 284.43 | 282.68 | 281.86 | 281.56 | 282.56 | 283.08 | 282.36 | 284.05 | 285.20 | 286.48 | 287.07 |
| 20 | 285.45 | 284.10 | 282.53 | 281.77 | 281.62 | 283.05 | 283.11 | 282.67 | 284.40 | 285.62 | 286.87 | 287.15 |
| 25 | 285.30 | 283.81 | 282.07 | 281.83 | 281.89 | 282.87 | 283.14 | 282.99 | 284.50 | 286.02 | 286.81 | 286.95 |
| EOM | 284.79 | 283.21 | 281.66 | 282.05 | 282.04 | 282.92 | 282.85 | 282.93 | 284.52 | 286.25 | 286.99 | 287.35 |

WTR YEAR 1986 MAX 287.35 SEP 30 MIN 281.19 FEB 18

### 430412087545801. Local number, ML-07/22E/17-0120.

LOCATION.--Lat 43°04'12", long 87°54'58", Hydrologic Unit 04040003. Owner: Nunn-Bush Shoe Co.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 400 ft, cased to 215 ft, open end.

DATUM.--Altitude of land-surface is 685 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of concrete, 8.75 ft below land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.67 ft below land-surface datum, Mar. 19, 1986; lowest water level, 107.95 ft below land-surface datum, Feb. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 55.53 | 55.68 | 55.63 | 55.16 | 55.37 | 55.24 | 55.33 | 55.11 | 55.64 | 55.85 | 56.26 | 56.23 |
| 10 | 55.85 | 55.95 | 55.78 | 55.48 | 55.51 | 55.09 | 55.21 | 55.51 | 55.68 | 55.93 | 56.13 | 56.14 |
| 15 | 55.75 | 56.01 | 55.52 | 55.46 | 55.36 | 55.25 | 55.09 | 55.23 | 55.73 | 56.01 | 56.09 | 56.44 |
| 20 | 55.94 | 55.87 | 55.70 | 55.28 | 55.32 | 55.66 | 55.15 | 55.54 | 55.97 | 56.13 | 56.38 | 56.32 |
| 25 | 55.85 | 55.93 | 55.22 | 55.36 | 55.48 | 55.50 | 55.31 | 55.59 | 55.99 | 56.08 | 56.29 | 55.91 |
| EOM | 55.80 | 55.70 | 55.18 | 55.58 | 55.38 | 55.25 | 55.07 | 55.34 | 55.82 | 56.10 | 56.46 | 56.05 |

WTR YEAR 1986 MAX 56.60 SEP 16 MIN 54.67 MAR 19

### 425613088014301. Local number, ML-06/21E/32-0148.

LOCATION.--Lat 42°56'13", long 88°01'43", Hydrologic Unit 04040002. Owner: Milwaukee County.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 180 ft, cased to 43 ft, open end.

DATUM.--Altitude of land-surface is 774 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 1/4-inch pipe, at land-surface datum.

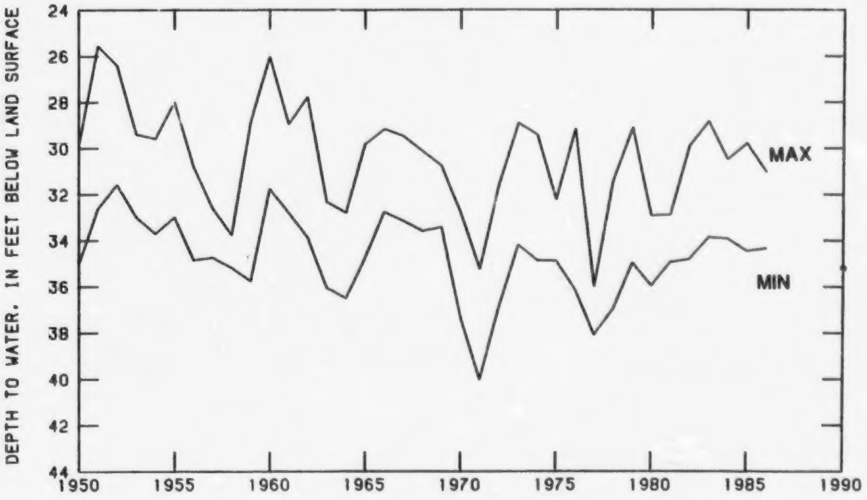
PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.44 ft below land-surface datum, May 3, 1951; lowest water level measured, 40.03 ft below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 30 | 34.23 | JAN 30 | 34.03 | MAR 26 | 31.01 | MAY 29 | 31.90 | JUL 30 | 32.88 | SEP 29 | 31.63 |
| DEC 30 | 33.86 | FEB 27 | 34.34 | APR 29 | 31.56 | JUN 30 | 32.42 | AUG 28 | 32.06 | | |

MILWAUKEE COUNTY



ML-06/21E/32-0148 YEARLY MAX-MIN WATER LEVEL

## MONROE COUNTY

### 434342090495601. Local number, MO-15/04W/34-0002.

LOCATION.--Lat 43°43'42", long 90°49'56", Hydrologic Unit 07060001. Owner: Joseph Anderson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 44 ft.

DATUM.--Altitude of land-surface is 1,100 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.50 ft above land-surface datum.

REMARKS.--No measurements made in 1981-82 water year.

PERIOD OF RECORD.--July 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.66 ft below land-surface datum, Mar. 19, 1986; lowest water level measured, 18.23 ft below land-surface datum, Mar. 27, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 6.40 | 6.37 | 6.72 | 6.74 | 6.64 | 6.79 | 6.19 |  | 6.57 | 6.66 | 6.73 | 6.89 |
| 10 | 6.54 | 6.61 | 6.76 | 6.72 | 6.70 | 6.78 | 6.32 |  | 6.59 | 6.75 | 6.81 | 6.90 |
| 15 | 6.54 | 6.58 | 6.66 | 6.74 | 6.86 | 6.76 |  |  | 6.61 | 6.79 | 6.83 | 6.79 |
| 20 | 6.57 | 6.24 | 6.75 | 6.73 | 6.81 | 5.58 |  |  | 6.63 | 6.77 | 6.88 | 6.84 |
| 25 | 6.56 | 6.51 | 6.72 | 6.72 | 6.78 | 5.79 |  |  | 6.67 | 6.80 | 6.89 | 6.65 |
| EOM | 6.57 | 6.65 | 6.75 | 6.85 | 6.80 | 6.14 |  |  | 6.59 | 6.54 | 6.89 | 6.65 |

WTR YEAR 1986 MAX 6.90 SEP 10 MIN 4.66 MAR 19

### 440026090390101. Local number, MO-18/02W/29-0017.

LOCATION.--Lat 44°00'26", long 90°39'01", Hydrologic Unit 07040006. Owner: U.S. Army.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 9 in, depth 192 ft, cased to 109 ft, open end.

DATUM.--Altitude of land-surface is 909 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.43 ft below land-surface datum, May 8, 1973; lowest water level, 7.75 ft below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 6.06 | 6.14 | 5.76 | 6.35 | 6.72 | 7.08 | 5.29 | 5.56 | 6.10 | 5.86 | 4.99 | 5.98 |
| 10 | 5.94 | 5.98 | 5.90 | 6.40 | 6.82 | 7.14 | 5.25 | 5.67 | 6.16 | 6.02 | 5.23 | 6.06 |
| 15 | 5.95 | 6.00 | 6.00 | 6.46 | 6.80 | 7.16 | 5.30 | 5.75 | 6.23 | 5.84 | 5.40 | 5.44 |
| 20 | 6.04 | 5.89 | 6.10 | 6.53 | 6.91 | 6.66 | 5.36 | 5.81 | 6.35 | 5.76 | 5.56 | 5.38 |
| 25 | 6.16 | 5.70 | 6.17 | 6.61 | 6.98 | 6.01 | 5.44 | 5.90 | 6.41 | 5.89 | 5.72 | 4.35 |
| EOM | 6.29 | 5.66 | 6.28 | 6.66 | 7.02 | 5.33 | 5.50 | 6.01 | 5.90 | 4.87 | 5.88 | 4.05 |

WTR YEAR 1986 MAX 7.17 MAR 17 MIN 4.03 SEP 30

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## OCONTO COUNTY

### 445054088025201. Local number, OC-27/20E/03-0020.

LOCATION.--Lat 44°50'54", long 88°02'52", Hydrologic Unit 04030104. Owner: Wis. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 100 ft, cased to 88 ft, open end.

DATUM.--Altitude of land-surface is 640 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.07 ft below land-surface datum, June 20, 1969; lowest water level measured, 13.52 ft below land-surface datum, Aug. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 4 | 9.63 | APR 9 | 9.34 | MAY 2 | 9.39 | JUN 25 | 9.89 | AUG 21 | 9.98 | SEP 11 | 9.90 |
| JAN 3 | 9.82 | 17 | 9.24 | 22 | 9.51 | JUL 22 | 10.01 | | | | |

## ONEIDA COUNTY

### 455213089323501. Local number, ON-39/08E/18-0022.

LOCATION.--Lat 45°52'13", long 89°32'35", Hydrologic Unit 07070001. Owner: Wisconsin Valley Improvement Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 6 in, depth 27 ft, cased to 27 ft, open end.

DATUM.--Altitude of land-surface is 1,607 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 6.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.29 ft below land-surface datum, May 28, 1973; lowest water level, 19.29 ft below land-surface datum, Apr. 9, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 15.41 | 14.53 | 14.31 | 14.55 | 14.98 | 15.34 | 15.62 | 14.24 | 14.48 | 14.91 | 15.21 | 15.51 |
| 10 | 15.21 | 14.49 | 14.28 | 14.56 | 15.06 | 15.40 | 15.31 | 14.27 | 14.55 | 15.00 | 15.24 | 15.57 |
| 15 | 14.95 | 14.45 | | 14.70 | | 15.53 | 14.92 | 14.21 | 14.61 | 15.02 | 15.29 | 15.61 |
| 20 | 14.83 | 14.39 | 14.35 | 14.75 | | 15.64 | 14.70 | 14.21 | 14.72 | 15.04 | 15.36 | 15.60 |
| 25 | 14.71 | 14.37 | 14.41 | 14.78 | | 15.69 | 14.50 | 14.25 | 14.79 | 15.11 | 15.40 | 15.56 |
| EOM | 14.65 | 14.33 | 14.49 | 14.95 | | 15.74 | 14.38 | 14.30 | 14.83 | 15.18 | 15.49 | 15.57 |

WTR YEAR 1986 MAX 15.74 MAR 31 MIN 14.19 MAY 18

### 454026089425301. Local number, ON-37/06E/27-0023.

LOCATION.--Lat 45°40'26", long 89°42'53", Hydrologic Unit 07070001. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 37 ft, cased to 35 ft, well point 35-37 ft.

DATUM.--Altitude of land-surface is 1,529 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.35 ft below land-surface datum, July 22, 1973; lowest water level measured, 33.67 ft below land-surface datum, Apr. 15, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 6 | 29.18 | DEC 8 | 28.19 | FEB 9 | 28.35 | APR 13 | 28.34 | JUN 8 | 27.74 | AUG 3 | 27.62 |
| 13 | 28.91 | 16 | 28.12 | 15 | 28.40 | 20 | 28.39 | 15 | 27.77 | 11 | 27.60 |
| 20 | 28.70 | 22 | 28.12 | 23 | 28.52 | 27 | 28.10 | 22 | 27.62 | 17 | 27.66 |
| 27 | 28.57 | 29 | 28.14 | MAR 2 | 28.50 | MAY 4 | 27.95 | 29 | 27.55 | 25 | 27.65 |
| NOV 3 | 28.65 | JAN 5 | 28.14 | 9 | 28.51 | 12 | 27.72 | JUL 6 | 27.50 | 31 | 27.88 |
| 10 | 28.49 | 12 | 28.10 | 19 | 28.30 | 18 | 27.64 | 13 | 27.75 | SEP 14 | 27.68 |
| 17 | 28.20 | 20 | 28.07 | 23 | 28.27 | 26 | 27.70 | 20 | 27.67 | 22 | 27.80 |
| 24 | 28.05 | 26 | 28.07 | 30 | 28.52 | JUN 2 | 27.55 | 28 | 27.69 | 29 | 27.88 |
| DEC 4 | 28.21 | FEB 2 | 28.32 | APR 6 | 28.47 | | | | | | |

## OUTAGAMIE COUNTY

### 441734088251101. Local number, OU-21/17E/15-0029.

LOCATION.--Lat 44°17'34", long 88°25'11", Hydrologic Unit 04030204. Owner: Highland Memorial Park.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled irrigation artesian well, diameter 10 in, depth 300 ft.

DATUM.--Altitude of land-surface is 839 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of breather hole, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.84 ft below land-surface datum, Nov. 24, 1955; lowest water level measured, 64.48 ft below land-surface datum, Dec. 30, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 10 | 57.11 | FEB 3 | 57.32 | MAR 3 | 57.40 | APR 21 | 55.09 | MAY 21 | 55.79 | JUL 1 | 57.95 |
| | | | | | | | | | | SEP 29 | 61.40 |

## POLK COUNTY

### 453013092314601. Local number, PK-35/17W/08-0040.

LOCATION.--Lat 45°30'13", long 92°31'46", Hydrologic Unit 07030005. Owner: Village of Milltown.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 52 ft.

DATUM.--Altitude of land-surface is 1,250 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--September 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.55 ft below land-surface datum, Jul 23, 1986; lowest water level measured, 41.38 ft below land-surface datum, July 22, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 1 | 31.22 | DEC 23 | 30.34 | FEB 24 | 31.94 | APR 4 | 31.53 | JUN 13 | 29.80 | AUG 21 | 29.67 |
| NOV 26 | 30.00 | JAN 28 | 30.80 | MAR 21 | 31.50 | MAY 20 | 30.36 | JUL 23 | 29.55 | SEP 2 | 29.78 |

### 452352092332001. Local number, PK-34/18W/26-0093.

LOCATION.--Lat 45°23'52", long 92°33'20", Hydrologic Unit 07030005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 64 ft, cased to 60 ft, open end.

DATUM.--Altitude of land-surface is 1,140 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 2.00 ft above land-surface datum.

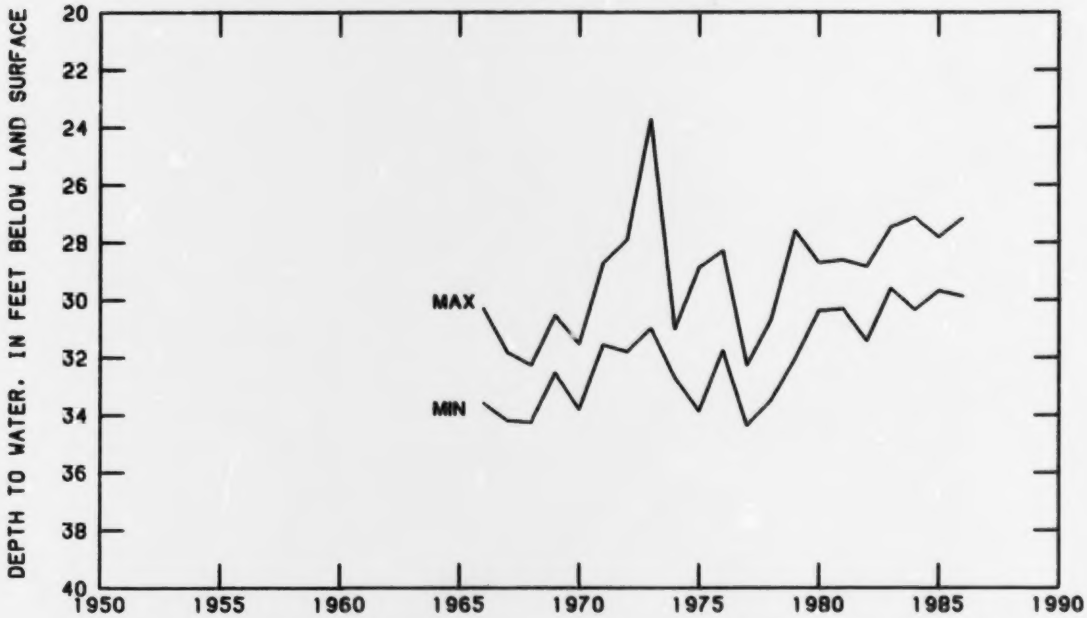
PERIOD OF RECORD.--March 10, 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.72 ft below land-surface datum, June 20, 1973; lowest water level measured, 34.37 ft below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 28.94 | NOV 27 | 28.25 | JAN 23 | 29.02 | APR 3 | 29.29 | JUN 11 | 27.16 | AUG 1 | 27.36 |
| 9 | 29.13 | DEC 4 | 28.28 | 30 | 29.14 | 11 | 28.92 | 19 | 27.23 | 15 | 27.46 |
| 16 | 28.39 | 11 | 28.37 | FEB 6 | 29.25 | 25 | 28.53 | 26 | 27.21 | 22 | 27.61 |
| 23 | 28.18 | 18 | 28.49 | 27 | 29.64 | MAY 2 | 28.18 | JUL 3 | 27.28 | 29 | 27.76 |
| 30 | 28.12 | 27 | 28.63 | MAR 5 | 29.68 | 9 | 27.94 | 10 | 27.31 | SEP 5 | 27.84 |
| NOV 6 | 28.08 | JAN 2 | 28.68 | 13 | 29.79 | 23 | 27.35 | 18 | 27.26 | 12 | 27.94 |
| 13 | 28.12 | 9 | 28.76 | 20 | 29.87 | 30 | 27.21 | 23 | 27.25 | 19 | 28.07 |
| 20 | 28.34 | 16 | 28.88 | 27 | 29.81 | JUN 6 | 27.17 | | | | |

POLK COUNTY



PK-34/18W/26-0093 YEARLY MAX-MIN WATER LEVEL

## PORTAGE COUNTY

443127089174101. Local number, PT-24/10E/28-0015.

LOCATION.--Lat 44°31'27", long 89°17'41", Hydrologic Unit 04030202. Owner: Lawrence Krogwold.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2 in, depth 52 ft, cased to 50 ft, screened 50-52 ft.

DATUM.--Altitude of land-surface is 1,133 ft above National Geodetic Vertical Datum of 1929. Measuring point: rim of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.50 ft below land-surface datum, Aug. 4, 1973; lowest water level measured, 38.81 ft below land-surface datum, Nov. 12, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 12 | 29.25 | DEC 21 | 29.28 | MAR 1 | 29.25 | APR 26 | 29.24 | JUN 21 | 29.11 | AUG 16 | 29.18 |
| 26 | 29.28 | JAN 4 | 29.26 | 15 | 29.27 | MAY 10 | 29.20 | JUL 5 | 29.12 | 30 | 29.21 |
| NOV 9 | 29.28 | 18 | 29.25 | 29 | 29.32 | 24 | 29.16 | 19 | 29.13 | SEP 13 | 29.24 |
| 23 | 29.30 | FEB 1 | 29.24 | APR 12 | 29.31 | JUN 7 | 29.13 | AUG 2 | 29.16 | 27 | 29.28 |
| DEC 7 | 29.30 | 15 | 29.25 | | | | | | | | |

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## PORTAGE COUNTY

### 442623089302701. Local number, PT-23/08E/25-0376.

LOCATION.--Lat 44°26'23", long 89°30'27", Hydrologic Unit 07070003. Owner: U. S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in, depth 36 ft, cased to 34 ft, well point 34-36 ft.

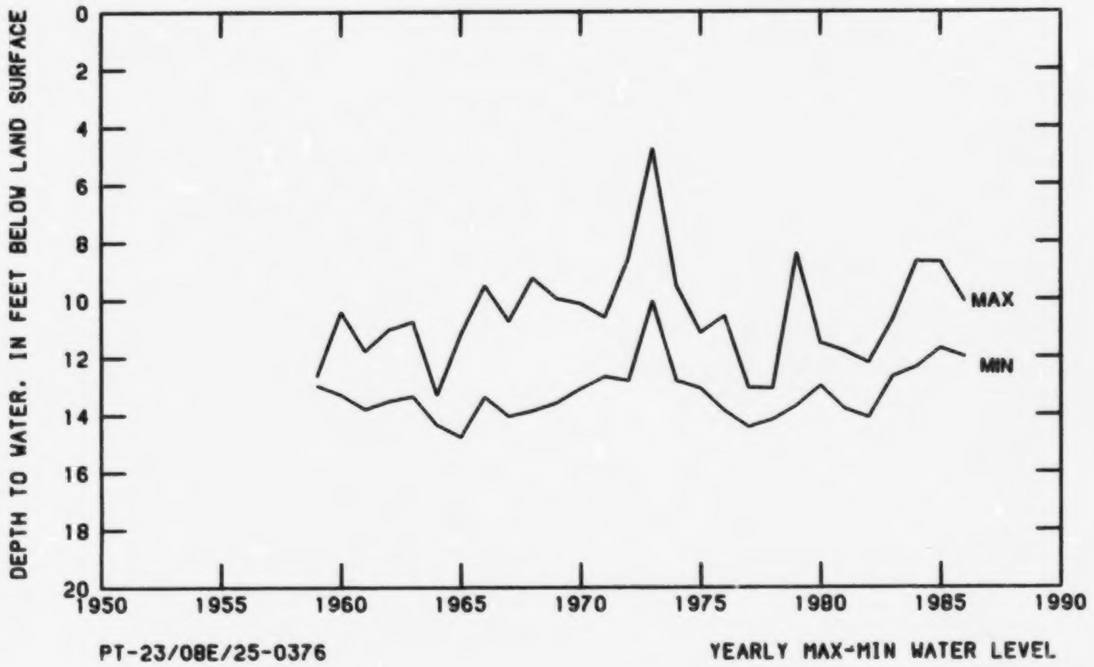
DATUM.--Altitude of land-surface is 1,099 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--December 1, 1959, to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft below land-surface datum, June 5, 1973; lowest water level measured, 14.78 ft below sand-surface datum. Feb. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 9 | 11.18 | JAN 23 | 11.17 | MAR 18 | 11.88 | MAY 16 | 11.60 | JUL 16 | 11.48 | AUG 20 | 11.65 |
| NOV 16 | 10.68 | FEB 17 | 10.40 | APR 8 | 10.05 | JUN 17 | 10.65 | AUG 6 | 11.42 | SEP 12 | 11.99 |
| DEC 20 | 10.69 | | | | | | | | | | |



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## PRICE COUNTY

### 455448090263401. Local number, PR-40/01W/24-0006.

LOCATION.--Lat 45°54'48", long 90°26'34", Hydrologic Unit 07050002. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 8 in, depth 13 ft, cased to 13 ft.

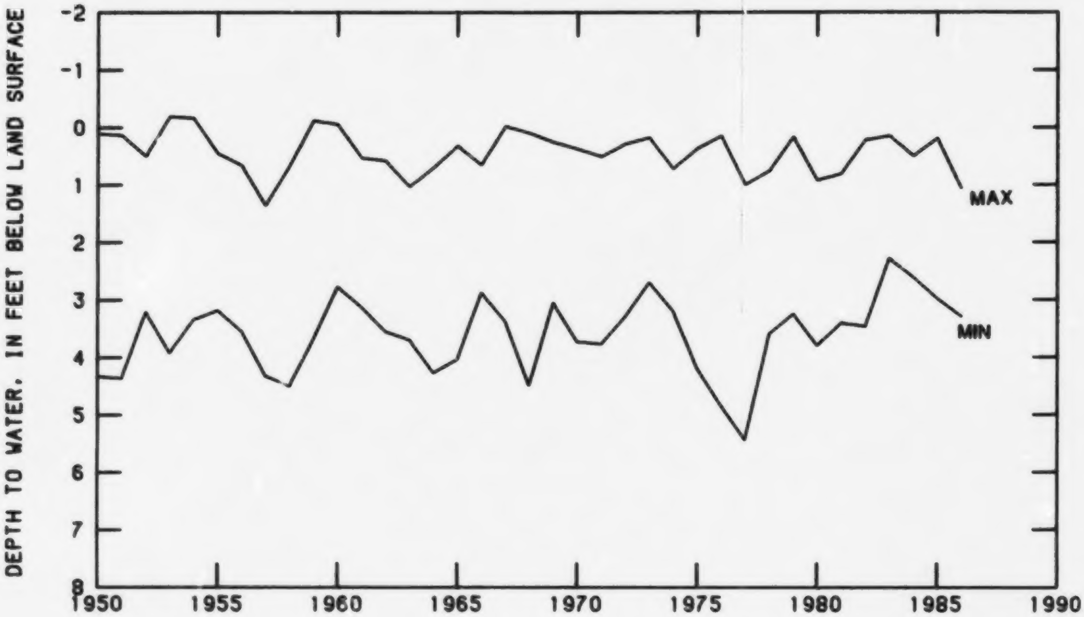
DATUM.--Altitude of land-surface is 1,510 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 5.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft above land-surface datum, June 29, 1946; lowest water level measured, 5.67 ft below land-surface datum, Oct. 31, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 22 | 1.24 | DEC 20 | 2.29 | FEB 14 | 2.59 | APR 11 | 1.90 | JUN 6 | 2.23 | AUG 8 | 2.78 |
| NOV 1 | 0.88 | 27 | 2.17 | 21 | 2.70 | 18 | 1.37 | 13 | 2.22 | 15 | 2.12 |
| 8 | 1.18 | JAN 2 | 2.20 | 28 | 2.79 | 25 | 1.05 | 20 | 2.23 | 22 | 2.30 |
| 15 | 1.40 | 10 | 2.35 | MAR 14 | 2.13 | MAY 2 | 1.83 | 27 | 1.79 | 29 | 3.29 |
| 22 | 1.55 | 17 | 2.33 | 21 | 1.78 | 9 | 1.31 | JUL 4 | 2.26 | SEP 5 | 2.95 |
| 29 | 1.90 | 24 | 2.24 | 28 | 1.55 | 16 | 1.51 | 11 | 2.37 | 12 | 2.95 |
| DEC 6 | 2.40 | 31 | 2.20 | 31 | 1.38 | 23 | 1.64 | 18 | 2.15 | 18 | 2.69 |
| 13 | 2.35 | FEB 7 | 2.70 | APR 4 | 1.38 | 30 | 1.94 | 25 | 2.24 | 26 | 2.35 |
|  |  |  |  |  |  |  |  | AUG 1 | 2.55 | 30 | 2.39 |



PR-40/01W/24-0006 YEARLY MAX-MIN WATER LEVEL

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## RACINE COUNTY

424202087542301. Local number, RA-03/22E/21-0005.

LOCATION.--Lat 42°42'02", long 87°54'23", Hydrologic Unit 04040002. Owner: Chicago, Milwaukee, St. Paul and Pacific Railroad Co.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in, depth 1,176 ft, cased to 586 ft, 10 in liner 976-1,083 ft.

DATUM.--Altitude of land-surface is 730 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

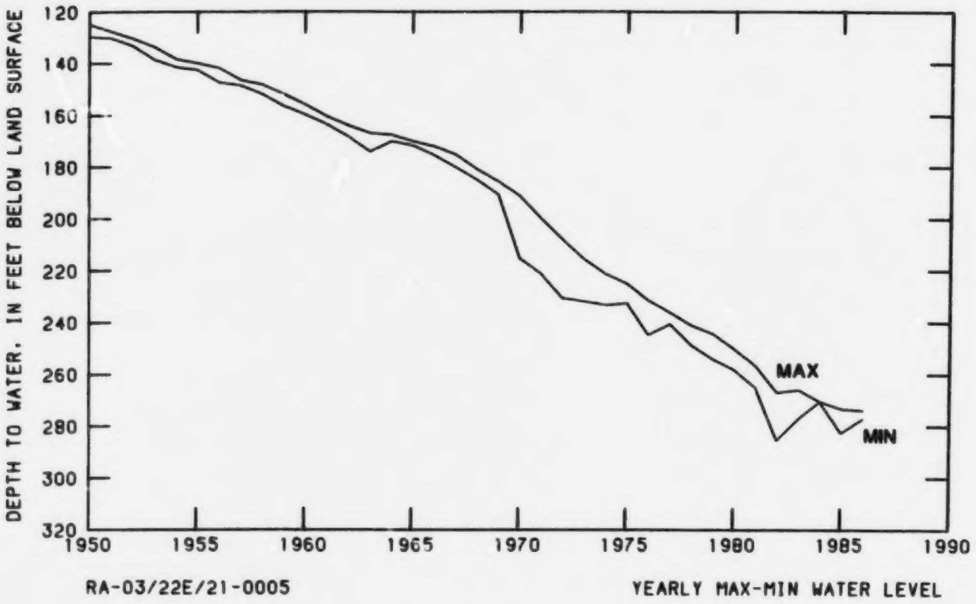
REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.00 ft below land-surface datum, July 29, 1946; lowest water level measured, 282.54 ft below land-surface datum, Aug. 20, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 281.89 | NOV 20 | 280.23 | JAN 14 | 273.89 | MAR 13 | 274.12 | JUN 19 | 275.19 | AUG 19 | 276.19 |
| 21 | 274.65 | DEC 12 | 274.66 | 28 | 277.08 | APR 15 | 274.46 | JUL 15 | 275.47 | SEP 19 | 276.27 |
| NOV 14 | 274.65 | 19 | 276.86 | FEB 14 | 274.19 | MAY 19 | 275.07 | | | | |



## RICHLAND COUNTY

431840090203201. Local number, RI-10/01E/26-0023.

LOCATION.--Lat 43°18'40", long 90°20'32", Hydrologic Unit 07070005. Owner: Koch Tractor, Inc.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 160 ft, cased to 135 ft, open end.

DATUM.--Altitude of land-surface is 725 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 1-in breather pipe, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.11 ft below land-surface datum, May 22, 1973; lowest water level measured, 15.70 ft below land-surface datum, Dec. 13, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 15 | 13.76 | DEC 10 | 11.92 | FEB 13 | 12.45 | APR 9 | 11.25 | JUN 3 | 11.72 | AUG 6 | 12.36 |
| NOV 12 | 12.15 | JAN 14 | 11.99 | MAR 12 | 12.02 | MAY 8 | 11.49 | JUL 8 | 13.66 | SEP 9 | 12.80 |

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## ROCK COUNTY

423956089022301. Local number, RO-02/12E/02-0003.

LOCATION.--Lat 42°39'56", long 89°02'23", Hydrologic Unit 07090001. Owner: School for the Blind, Janesville.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 470 ft, cased to 113 ft, open end.

DATUM.--Altitude of land-surface is 824 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole cap of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.27 ft below land-surface datum, Apr. 2 and 16, 1986; lowest water level measured, 59.43 ft below land-surface datum, Aug. 5, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | 51.25 | NOV 27 | 50.11 | JAN 22 | 50.32 | MAR 19 | 49.94 | MAY 14 | 49.50 | JUL 10 | 50.15 |
| 9 | 51.18 | DEC 5 | 50.04 | 29 | 50.05 | 26 | 49.52 | 21 | 49.68 | 17 | 50.18 |
| 16 | 51.17 | 11 | 50.01 | FEB 6 | 50.01 | APR 2 | 49.27 | 28 | 49.76 | AUG 7 | 50.49 |
| 23 | 50.90 | 18 | 50.14 | 12 | 50.15 | 9 | 49.28 | JUN 5 | 49.81 | 14 | 50.62 |
| 30 | 50.78 | 26 | 49.86 | 19 | 49.95 | 16 | 49.27 | 12 | 49.77 | 21 | 50.69 |
| NOV 6 | 50.49 | JAN 1 | 50.15 | 26 | 49.50 | 24 | 49.30 | 19 | 49.94 | SEP 18 | 50.45 |
| 13 | 50.52 | 8 | 50.30 | MAR 5 | 49.84 | 30 | 49.55 | 26 | 50.02 | 26 | 50.19 |
| 21 | 50.48 | 18 | 50.08 | 12 | 49.80 | MAY 7 | 49.49 | JUL 3 | 50.15 | | |

## RUSK COUNTY

453107090420101. Local number, RU-35/03W/14-0089.

LOCATION.--Lat 45°31'07", long 90°42'01", Hydrologic Unit 07050004. Owner: Hawkins Cemetery.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table well, diameter 6 in, depth 25 ft.

DATUM.--Altitude of land-surface is 1,380 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.49 ft below land-surface datum, Oct. 23, 1985; lowest water level measured, 23.50 ft below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|
| OCT 23 | 8.49 | SEP 25 | 9.48 |

## ST. CROIX COUNTY

450812092223601. Local number, SC-31/16W/29-0094.

LOCATION.--Lat 45°08'12", long 92°22'36", Hydrologic Unit 07030005. Owner: Cylon Methodist Church.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 4 in, depth 73 ft, cased to 63 ft, open end.

DATUM.--Altitude of land-surface is 1,059 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured. 28.29 ft below land-surface datum, Sept. 24, 1973; lowest water level measured, 36.04 ft below land-surface datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 22 | 30.54 | NOV 13 | 30.08 | MAY 19 | 29.66 | JUN 30 | 29.55 | AUG 1 | 29.46 | SEP 3 | 29.45 |
| | | | | | | | | | | 30 | 28.66 |

## SAUK COUNTY

### 432201089460101. Local number, SK-10/06E/03-0001.

LOCATION.--Lat 43°22'01", long 89°46'01", Hydrologic Unit 07070005. Owner: Badger Army Ammunition Plant.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 16 in, depth 426 ft, cased to 203 ft, open end.

DATUM.--Altitude of land-surface is 865 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.43 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.45 ft below land-surface datum, May 20, 1953; lowest water level, 93.25 ft below land-surface datum, June 4, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 66.56 | 64.89 | 66.18 | 65.53 | 65.34 | 64.90 | 64.53 | 65.39 | 64.07 | 64.26 | 64.50 | 64.39 |
| 10 | 65.71 | 66.15 | 66.00 | 65.50 | 65.22 | 64.90 | 64.35 | 64.11 | 64.53 | 64.48 | 64.24 | 64.06 |
| 15 | 65.61 | 66.23 | 66.16 | 65.41 | 65.13 | 65.01 | 64.14 | 63.20 | 63.86 | 64.20 | 64.41 | 63.78 |
| 20 | 65.22 | 66.37 | 66.39 | 65.19 | 65.22 | 65.08 | 64.40 | 63.29 | 64.74 | 64.79 | 64.88 | 63.56 |
| 25 | 65.09 | 66.24 | 66.06 | 65.27 | 65.27 | 64.72 | 64.10 | 63.62 | 64.22 | 64.75 | 64.98 | 63.44 |
| EOM | 64.90 | 65.94 | 65.81 | 65.43 | 65.08 | 64.70 | 64.86 | 64.29 | 63.96 | 64.59 | 64.28 | 63.31 |

WTR YEAR 1986 MAX 68.55 OCT 1 MIN 63.07 SEP 30

## SHAWANO COUNTY

### 444203088214601. Local number, SH-26/18E/30-0001.

LOCATION.--Lat 44°42'03", long 88°21'46", Hydrologic Unit 04030103. Owner: Wis. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 132 ft.

DATUM.--Altitude of land-surface is 917 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of plastic pipe, 2.43 ft below land-surface datum.

PERIOD OF RECORD.--April 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.- Highest water level measured, 52.86 ft below land-surface datum, Apr. 25, 1973; lowest water level measured, 64.60 ft below land-surface datum, Jan. 11, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 17 | 54.96 | JAN 22 | 55.36 | MAY 22 | 56.14 | JUN 26 | 56.12 | AUG 7 | 55.83 | SEP 11 | 56.51 |
| DEC 19 | 54.54 | APR 8 | 53.32 | 28 | 55.61 | JUL 15 | 56.38 | | | | |

## TAYLOR COUNTY

### 450947090483901. Local number, TA-31/04W/13-0001.

LOCATION.--Lat 45°09'47", long 90°48'39", Hydrologic Unit 07050005. Owner: Village of Gilman.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in, depth 26 ft, cased to 16 ft, screened 16-26 ft.

DATUM.--Altitude of land-surface is 1,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.93 ft below land-surface datum, Apr. 18, 1982; lowest water level, 13.11 ft below land-surface datum, Oct. 15, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 6.15 | 8.16 | | | 8.99 | 9.11 | 6.09 | 8.69 | 10.00 | 9.28 | 9.38 | 9.43 |
| 10 | 7.30 | 8.66 | | | 9.12 | 8.90 | 7.76 | 9.09 | 10.10 | 9.40 | 8.38 | 9.24 |
| 15 | 8.03 | 8.92 | | | 9.08 | 9.04 | 8.30 | 9.18 | 9.71 | 9.05 | 7.70 | 7.60 |
| 20 | 8.59 | 8.46 | | 9.20 | 9.15 | 8.75 | 8.35 | 9.35 | 9.79 | 8.85 | 8.45 | 7.78 |
| 25 | 8.86 | | | 9.05 | 9.21 | 8.36 | 8.75 | 9.75 | 9.50 | 8.73 | 8.99 | 6.10 |
| EOM | 9.09 | | | 9.05 | 9.28 | 5.46 | 8.60 | 9.91 | 9.61 | 9.06 | 9.35 | 6.33 |

WTR YEAR 1986 MAX 10.10 JUN 10 MIN 4.40 SEP 22

## TAYLOR COUNTY

450830090215201. Local number, TA-31/01E/28-0006.

LOCATION.--Lat 45°08'30", long 90°21'52", Hydrologic Unit 07040007. Owner: P. J. Ziehlke.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Dug domestic water table well, diameter 3.00 ft, depth 35 ft, open end.

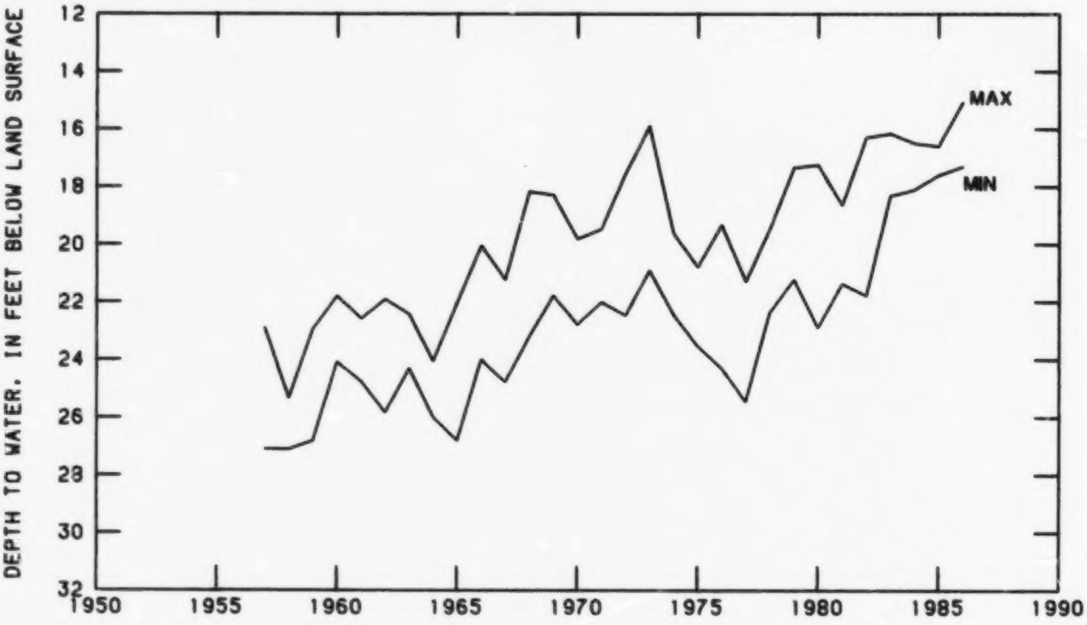
DATUM.--Altitude of land-surface is 1,460 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of curb, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--August 20, 1957, to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.10 ft below land-surface datum, Apr. 9, 1986; lowest water level measured, 27.10 ft below land-surface datum, Mar. 13, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 21 | 16.60 | NOV 14 | 17.60 | DEC 19 | 17.25 | JAN 20 | 17.30 | MAR 19 | 16.90 | APR 9 | 15.10 |



TA-31/01E/28-0006 YEARLY MAX-MIN WATER LEVEL

451919090172401. Local number, TA-33/02E/30-0009.

LOCATION.--Lat 45°19'19", long 90°17'24", Hydrologic Unit 07050005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 160 ft, cased to 155 ft, open end.

DATUM.--Altitude of land-surface is 1,591 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.30 ft below land-surface datum, July 19, 1979; lowest water level measured, 35.35 ft below land-surface datum, June 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 22 | 29.31 | NOV 14 | 29.45 | DEC 19 | 29.43 | JAN 30 | 30.90 | MAR 19 | 31.30 | APR 9 | 29.87 |

BEST COPY AVAILABLE

## TREMPEALEAU COUNTY

### 440422091182901. Local number, TR-19/08W/35-0001.

LOCATION.--Lat 44°04'22", long 91°18'29", Hydrologic Unit 07040007. Owner: Mrs. William Davidson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 195 ft.

DATUM.--Altitude of land-surface is 820 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.18 ft below land-surface datum, Jan. 13, 1955; lowest water level measured, 144.95 ft below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 17 | 137.82 | DEC 15 | 136.79 | FEB 16 | 137.92 | MAY 15 | 136.81 | JUL 16 | 135.94 | SEP 17 | 136.96 |
| NOV 17 | 137.57 | JAN 17 | 137.16 | MAR 16 | 137.51 | JUN 17 | 136.46 | AUG 17 | 136.64 | | |

### 440414091270401. Local number, TR-19/09W/33-0009.

LOCATION.--Lat 44°04'14", long 91°27'04", Hydrologic Unit 07040005. Owner: Village of Centerville.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table, diameter 6 in, depth 71 ft, cased to 66 ft, screened 66-71 ft.

DATUM.--Altitude of land-surface is 740 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of breather pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.29 ft below land-surface datum, Apr. 2, 1985; lowest water level measured, 57.11 ft below land-surface datum, Mar. 16, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 5 | 45.98 | DEC 3 | 46.47 | FEB 4 | 46.36 | APR 1 | 46.46 | JUN 5 | 46.66 | JUL 8 | 46.48 |
| NOV 6 | 45.49 | JAN 7 | 46.66 | MAR 3 | 46.76 | MAY 2 | 46.52 | | | | |

## WALWORTH COUNTY

### 423532088254601. Local number, WW-02/17E/36-0037.

LOCATION.--Lat 42°35'32", long 88°25'46", Hydrologic Unit 07120006. Owner: Lake Geneva Water Works.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 820 ft, cased to 10 in 0-214 ft, 8 in 214-227 ft, open end.

DATUM.--Altitude of land-surface is 860 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.48 ft below land-surface datum, Feb. 14, 1962; lowest water level measured, 205.89 ft below land-surface datum, Aug. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 22 | 205.46 | DEC 30 | 204.51 | FEB 6 | 204.06 | APR 29 | 203.63 | MAY 29 | 203.95 | JUL 30 | 205.30 |
| NOV 29 | 205.03 | JAN 31 | 204.44 | MAR 14 | 203.75 | MAY 20 | 203.80 | JUN 30 | 204.68 | AUG 29 | 205.89 |
| | | | | | | | | | | SEP 10 | 205.31 |

## WAUKESHA COUNTY

430049088131301. Local number, WK-06/19E/02-0014.

**LOCATION.**--Lat 43°00'49", long 88°13'13", Hydrologic Unit 07120006. Owner: New Tribes Mission, Waukesha.

**AQUIFER.**--Sandstone.

**WELL CHARACTERISTICS.**--Drilled unused artesian well, diameter 8 in, depth 1,300 ft.

**DATUM.**--Altitude of land-surface is 875 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, at land-surface datum.

**REMARKS.**--Water level affected by pumping of nearby municipal wells.

**PERIOD OF RECORD.**--September 1946 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 249.86 ft below land-surface datum, July 6, 1947; lowest water level, 470.13 ft below land-surface datum, Sept. 13, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 466.59 | 462.24 | 457.30 | 451.46 | 459.63 | 453.13 | 456.31 | 459.17 |  | 460.88 |  |  |
| 10 | 466.04 | 459.14 | 456.60 | 452.19 | 457.64 | 455.33 | 454.57 | 460.65 | 460.23 | 462.73 |  |  |
| 15 | 466.71 | 460.36 | 456.12 | 452.16 | 457.57 | 451.66 | 454.79 | 461.27 | 459.33 | 459.34 |  |  |
| 20 | 464.86 | 459.75 | 456.26 | 452.59 | 456.02 | 458.13 | 457.25 | 460.80 | 460.54 | 461.90 |  |  |
| 25 | 466.32 | 459.37 | 454.96 | 454.27 | 456.67 | 455.11 | 454.62 | 458.57 | 462.31 | 465.66 |  |  |
| EOM | 467.60 | 458.27 | 450.61 | 460.11 | 456.33 | 458.83 | 459.13 | 460.71 | 460.18 | 464.43 |  |  |

WTR YEAR 1986 MAX 468.37 OCT 2 MIN 450.63 JAN 2

## WAUKESHA COUNTY

425535088131701. Local number, WK-05/19E/02-0031.

**LOCATION.**--Lat 42°55'35", long 88°13'17", Hydrologic Unit 07120006. Owner: William M. Foss.

**AQUIFER.**--Silurian dolomite.

**WELL CHARACTERISTICS.**--Drilled unused artesian well, diameter 6 in, depth 508 ft, cased to 434 ft, open end.

**DATUM.**--Altitude of land-surface is 962 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

**PERIOD OF RECORD.**--May 1947 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 126.28 ft below land-surface datum, June 10, 1974; lowest water level, 138.14 ft below land-surface datum, Feb. 2, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 131.45 | 131.16 | 130.32 | 130.49 | 130.39 | 130.35 | 129.46 | 129.71 | 130.40 | 130.30 | 130.47 | 130.65 |
| 10 | 131.49 | 131.11 | 130.27 | 130.42 | 130.38 | 130.32 | 129.47 | 129.89 | 130.38 | 130.40 | 130.27 | 130.54 |
| 15 | 131.37 | 130.95 | 130.18 |  | 130.33 | 130.16 | 129.46 | 129.85 | 130.30 | 130.40 | 130.21 | 130.35 |
| 20 | 131.41 | 130.77 | 130.25 |  | 130.33 | 129.92 | 129.49 | 129.98 | 130.63 | 130.40 | 130.45 | 130.47 |
| 25 | 131.37 | 130.65 | 130.45 |  | 130.37 | 129.63 | 129.59 | 130.04 | 130.59 | 130.48 | 130.60 | 130.28 |
| EOM | 131.33 | 130.48 | 130.65 | 130.54 | 130.33 | 129.51 | 129.79 | 130.21 | 130.32 | 130.33 | 130.56 | 130.04 |

WTR YEAR 1986 MAX 131.55 OCT 7 MIN 129.97 SEP 30

## WAUPACA COUNTY

441545088522901. Local number, WP-21/13E/25-0002.

**LOCATION.**--Lat 44°15'45", long 88°52'29", Hydrologic Unit 04030202. Owner: Village of Fremont.

**AQUIFER.**--Sandstone.

**WELL CHARACTERISTICS.**--Drilled unused artesian well, diameter 8 in, depth 205 ft, cased to 109 ft, open end.

**DATUM.**--Altitude of land-surface is 764 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in cap, 1.00 ft above land-surface datum.

**PERIOD OF RECORD.**--August 1950 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.65 ft below land-surface datum, Apr. 7, 1979; lowest water level measured, 15.91 ft below land-surface datum, Feb. 23, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 5 | 13.59 | DEC 7 | 12.11 | FEB 8 | 13.60 | APR 12 | 10.66 | JUN 7 | 13.25 | AUG 2 | 12.91 |
| 12 | 13.30 | 14 | 12.33 | 15 | 13.62 | 19 | 10.89 | 14 | 13.18 | 9 | 13.32 |
| 19 | 13.02 | 21 | 12.55 | 22 | 13.76 | 26 | 11.53 | 21 | 13.22 | 16 | 13.44 |
| 26 | 13.06 | 28 | 12.75 | MAR 1 | 13.72 | MAY 3 | 11.96 | 28 | 13.22 | 23 | 13.52 |
| NOV 2 | 13.09 | JAN 4 | 12.91 | 8 | 13.77 | 10 | 12.48 | JUL 5 | 13.26 | SEP 6 | 13.80 |
| 9 | 12.42 | 11 | 13.11 | 15 | 13.63 | 17 | 12.76 | 12 | 13.27 | 13 | 13.43 |
| 16 | 12.05 | 18 | 13.22 | 22 | 12.77 | 24 | 12.86 | 19 | 13.43 | 20 | 13.17 |
| 23 | 11.87 | 25 | 13.34 | 29 | 11.19 | 31 | 13.27 | 26 | 13.03 | 27 | 12.44 |
| 30 | 11.75 | FEB 1 | 13.53 | APR 5 | 10.46 |  |  |  |  |  |  |

## WAUSHARA COUNTY

### 440713089320801. Local number, WS-19/08E/15-0008.

LOCATION.--Lat 44°07'13", long 89°32'08", Hydrologic Unit 07070003. Owner: University of Wisconsin Experiment Farm, Hancock.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted observation water-table well, diameter 4 in, depth 18 ft, cased to 18 ft.

DATUM.--Altitude of land-surface is 1,080 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.88 ft below land-surface datum, July 5, 1973; lowest water level, 15.71 ft below land-surface datum, June 10, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
LOWEST VALUE

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 8.86 | 8.73 | 8.42 | 8.61 | 8.91 | 9.18 | 8.11 | 7.77 | 8.24 | 8.44 | 8.70 | 8.75 |
| 10 | 8.88 | 8.62 | 8.39 | 8.67 | 8.97 | 9.22 | 8.02 | 8.02 | 8.37 | 8.64 | 8.69 | 8.76 |
| 15 | 8.84 | 8.58 | 8.38 | 8.72 | 9.01 | 9.29 | 7.94 | 7.83 | 8.29 | 8.54 | 8.65 | 8.80 |
| 20 | 8.87 | 8.54 | 8.44 | 8.76 | 9.06 | 9.13 | 7.89 | 7.92 | 8.57 | 8.57 | 8.67 | 8.83 |
| 25 | 8.86 | 8.49 | 8.48 | 8.80 | 9.11 | 8.99 | 7.83 | 7.95 | 8.59 | 8.62 | 8.70 | 8.86 |
| EOM | 8.87 | 8.43 | 8.55 | 8.88 | 9.14 | 8.27 | 7.82 | 8.08 | 8.38 | 8.54 | 8.73 | 8.89 |

WTR YEAR 1986 MAX 9.31 MAR 17 MIN 7.74 MAY 6

### 441414089091101. Local number, WS-20/11E/02-0053.

LOCATION.--Lat 44°14'14", long 89°09'11", Hydrologic Unit 04030202. Owner: Merle Knox.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 177 ft, cased to 172 ft, screened 172-177 ft.

DATUM.--Altitude of land-surface is 923 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.97 ft below land-surface datum, June 26, 1973; lowest water level measured, 40.41 ft below land-surface datum, Mar. 4, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 18 | 34.22 | DEC 16 | 33.58 | FEB 21 | 33.65 | APR 15 | 33.02 | JUN 18 | 32.81 | AUG 15 | 33.41 |
| NOV 17 | 33.74 | JAN 16 | 33.70 | MAR 14 | 34.10 | MAY 18 | 32.99 | JUL 14 | 33.37 | SEP 14 | 33.58 |

## WINNEBAGO COUNTY

### 440122088324601. Local number, WI-18/16E/23-0006.

LOCATION.--Lat 44°01'22", long 88°32'46", Hydrologic Unit 04030201. Owner: City of Oshkosh.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 200 ft.

DATUM.--Altitude of land-surface is 765 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 1 in pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.20 ft below land-surface datum, Apr. 26, 1979; lowest water level measured, 39.75 ft below land-surface datum, Sept. 1, 1960.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 30 | 19.53 | DEC 30 | 19.68 | FEB 27 | 20.68 | MAY 5 | 18.49 | JUN 30 | 20.01 | SEP 4 | 19.74 |
| DEC 3 | 19.04 | JAN 29 | 21.01 | MAR 27 | 17.98 | 30 | 19.45 | JUL 31 | 19.60 | 29 | 18.17 |

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

GEOLOGICAL UNIT.--110QRNR, rocks of the Quaternary System of the Cenzoic Erathem. 372EKMD, Elk Mound Group of the Cambrian System. 400BCPX, basement complex, includes rocks of the Precambrian Erathem.

| STATION NUMBER | LOCAL IDENT- I- FIER | GEO- LOGIC UNIT | DATE OF SAMPLE | DEPTH OF WELL, TOTAL (FEET) (72008) | SPE- CIFIC CON- DUC- TANCE (US/CM) (00095) | PH (STAND- ARD UNITS) (00400) | TEMPER- ATURE (DEG C) (00010) |
|---|---|---|---|---|---|---|---|
| | | | ADAMS | | | | |
| 440146089364402 | AD-18/07E/13-0224 | 110QRNR | 05-19-86 | 27.70 | 360 | 7.80 | 9.0 |
| 440151089363001 | AD-18/07E/13-0225 | 110QRNR | 05-19-86 | 70.60 | 240 | 7.80 | 10.0 |
| | | 110QRNR | 09-25-86 | 70.60 | 280 | 8.00 | 10.5 |
| 440151089363002 | AD-18/07E/13-0226 | 110QRNR | 05-19-86 | 28.00 | 500 | 7.80 | 9.0 |
| 440159089370501 | AD-18/07E/13-0221 | 110QRNR | 05-19-86 | 62.70 | 250 | 8.10 | 10.0 |
| | | 110QRNR | 09-25-86 | 62.70 | 370 | 8.00 | 11.0 |
| 440159089370502 | AD-18/07E/13-0222 | 110QRNR | 05-19-86 | 28.20 | 290 | 8.20 | 9.0 |
| | | 110QRNR | 09-25-86 | 28.20 | 155 | 8.30 | 11.0 |
| 440207089363001 | AD-18/07E/13-0227 | 110QRNR | 05-19-86 | 70.50 | 240 | 7.70 | 10.0 |
| | | 110QRNR | 09-25-86 | 70.50 | 220 | 7.80 | 11.5 |
| 440207089363002 | AD-18/07E/13-0228 | 110QRNR | 05-19-86 | 20.60 | 145 | 8.20 | 8.0 |
| | | 110QRNR | 09-25-86 | 20.60 | 185 | 8.40 | 12.0 |
| 440211089365101 | AD-18/07E/13-0229 | 110QRNR | 05-19-86 | 70.20 | 250 | 7.70 | 10.0 |
| | | 110QRNR | 09-25-86 | 70.20 | 230 | 7.90 | 11.0 |
| 440211089365102 | AD-18/07E/13-0230 | 110QRNR | 05-19-86 | 30.35 | 165 | 8.10 | 10.0 |
| | | 110QRNR | 09-25-86 | 30.35 | 130 | 8.20 | 10.5 |
| 450158089364701 | AD-18/07E/13-0138 | 110QRNR | 05-19-86 | 100 | 310 | 8.00 | 10.0 |
| | | 110QRNR | 09-25-86 | 100 | 320 | 8.00 | 11.5 |
| | | | PORTAGE | | | | |
| 441650089305001 | PT-21/08E/23-1003 | 110QRNR | 05-20-86 | 54.70 | 65 | 6.40 | 10.0 |
| | | 110QRNR | 09-23-86 | 54.70 | 90 | 6.50 | 9.5 |
| 441650089305002 | PT-21/08E/23-1004 | 110QRNR | 09-23-86 | 20.40 | 130 | 8.30 | 10.5 |
| 441651089311101 | PT-21/08E/23-1001 | 110QRNR | 05-20-86 | 49.00 | 120 | 8.30 | 9.0 |
| | | 110QRNR | 09-23-86 | 49.00 | 125 | 8.50 | 9.0 |
| 441651089311102 | PT-21/08E/23-1002 | 110QRNR | 05-20-86 | 20.60 | 120 | 8.50 | 8.0 |
| | | 110QRNR | 09-23-86 | 20.60 | 135 | 8.40 | 10.5 |
| 441702089310401 | PT-21/08E/23-0403 | 110QRNR | 05-20-86 | 85.00 | 400 | 7.60 | 10.5 |
| | | 110QRNR | 09-23-86 | 85.00 | 380 | 7.70 | 10.5 |
| 441704089304101 | PT-21/08E/23-1009 | 110QRNR | 05-20-86 | 49.40 | 760 | 8.10 | 10.0 |
| | | 110QRNR | 09-23-86 | 49.40 | 740 | 8.10 | 9.5 |
| 441704089304102 | PT-21/08E/23-1010 | 110QRNR | 05-20-86 | 14.80 | 200 | 8.00 | 8.0 |
| | | 110QRNR | 09-23-86 | 14.80 | 480 | 7.80 | 12.0 |
| 441706089312301 | PT-21/08E/23-1005 | 110QRNR | 05-20-86 | 49.20 | 560 | 8.20 | 10.0 |
| | | 110QRNR | 09-23-86 | 49.20 | 275 | 8.20 | 9.5 |
| 441706089312302 | PT-21/08E/23-1006 | 110QRNR | 05-20-86 | 15.50 | 200 | 8.80 | 8.0 |
| | | 110QRNR | 09-23-86 | 15.50 | 210 | 8.60 | 12.5 |
| 441714089310602 | PT-21/08E/23-1008 | 110QRNR | 05-20-86 | 20.40 | 440 | 8.10 | 8.0 |
| | | 110QRNR | 09-23-86 | 20.40 | 690 | 7.90 | 12.0 |
| 442317089415301 | PT-22/07E/17-1024 | 110QRNR | 05-20-86 | 34.00 | 340 | 6.60 | 9.0 |
| | | 110QRNR | 09-23-86 | 34.00 | 260 | 6.50 | 9.0 |
| 442317089415302 | PT-22/07E/17-1025 | 110QRNR | 05-20-86 | 13.10 | 65 | 5.30 | 7.5 |
| | | 110QRNR | 09-23-86 | 13.10 | 50 | 5.50 | 12.0 |
| 442318089404401 | PT-22/07E/16-1015 | 110QRNR | 05-21-86 | 39.50 | 115 | 6.60 | 9.5 |
| | | 110QRNR | 09-24-86 | 39.50 | 115 | 6.60 | 9.0 |
| 442318089404402 | PT-22/07E/16-1016 | 110QRNR | 05-21-86 | 17.70 | 310 | 5.30 | 7.5 |
| | | 110QRNR | 09-24-86 | 17.70 | 320 | 5.10 | 11.0 |
| 442318089411601 | PT-22/07E/16-1017 | 110QRNR | 05-21-86 | 18.40 | 135 | 5.30 | 8.0 |
| | | 110QRNR | 09-24-86 | 18.40 | 140 | 5.20 | 11.5 |
| 442329089411801 | PT-22/07E/17-1021 | 110QRNR | 05-21-86 | 42.00 | 135 | 6.60 | 9.5 |
| | | 110QRNR | 09-24-86 | 42.00 | 135 | 6.70 | 10.0 |
| 442329089411802 | PT-22/07E/17-1022 | 110QRNR | 05-21-86 | 12.85 | 85 | 6.40 | 7.0 |
| | | 110QRNR | 09-24-86 | 12.85 | 180 | 6.20 | 13.0 |
| 442329089415301 | PT-22/07E/17-1023 | 110QRNR | 09-23-86 | 10.00 | 105 | 5.60 | 14.0 |
| 442330089405801 | PT-22/07E/16-1018 | 110QRNR | 05-21-86 | 64.00 | 250 | 6.60 | 9.5 |
| | | 110QRNR | 09-24-86 | 64.00 | 215 | 6.90 | 10.0 |
| 442330089413601 | PT-22/07E/17-1026 | 110QRNR | 05-21-86 | 49.00 | 180 | 6.70 | 10.0 |
| | | 110QRNR | 09-24-86 | 49.00 | 225 | 6.60 | 11.0 |
| 442342089415101 | PT-22/07E/17-1019 | 110QRNR | 05-22-86 | 35.70 | 200 | 6.80 | 9.0 |
| | | 110QRNR | 09-23-86 | 35.70 | 215 | 6.70 | 8.0 |
| 442342089415102 | PT-22/07E/17-1020 | 110QRNR | 05-21-86 | 10.00 | 35 | 4.80 | 8.0 |
| | | 110QRNR | 09-23-86 | 10.00 | 40 | 4.90 | 11.5 |
| 442343089404501 | PT-22/07E/09-1011 | 110QRNR | 05-21-86 | 42.20 | 125 | 6.70 | 8.5 |
| | | 110QRNR | 09-24-86 | 42.20 | 140 | 7.10 | 8.5 |
| 442343089404502 | PT-22/07E/09-1012 | 110QRNR | 05-21-86 | 19.90 | 50 | 5.80 | 7.5 |
| | | 110QRNR | 09-24-86 | 19.90 | 50 | 5.50 | 9.0 |
| 442343089411501 | PT-22/07E/09-1013 | 110QRNR | 05-21-86 | 19.55 | 40 | 5.60 | 8.0 |
| | | 110QRNR | 09-24-86 | 19.55 | 40 | 5.70 | 9.5 |

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | DATE OF SAMPLE | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ADAMS | | | | | | |
| 440146089364402 | 05-19-86 | -- | -- | -- | -- | 2.1 | 1.0 | -- | -- | -- | 10 |
| 440151089363001 | 05-19-86 | -- | -- | -- | -- | 1.3 | .50 | -- | -- | -- | 1.0 |
| | 09-25-86 | -- | -- | -- | -- | 2.0 | .60 | -- | -- | -- | .90 |
| 440151089363002 | 05-19-86 | -- | -- | -- | -- | 1.8 | .80 | -- | -- | -- | 51 |
| 440159089370501 | 05-19-86 | -- | -- | -- | -- | 1.5 | .70 | -- | -- | -- | 16 |
| | 09-25-86 | -- | -- | -- | -- | 1.0 | .60 | -- | -- | -- | 35 |
| 440159089370502 | 05-19-86 | -- | -- | -- | -- | 3.2 | 3.4 | -- | -- | -- | 10 |
| | 09-25-86 | -- | -- | -- | -- | 2.0 | 3.2 | -- | -- | -- | 3.8 |
| 440207089363001 | 05-19-86 | -- | -- | -- | -- | 1.1 | .50 | -- | -- | -- | 2.2 |
| | 09-25-86 | -- | -- | -- | -- | 1.0 | .50 | -- | -- | -- | 2.5 |
| 440207089363002 | 05-19-86 | -- | -- | -- | -- | 1.1 | .60 | -- | -- | -- | 4.4 |
| | 09-25-86 | -- | -- | -- | -- | 1.0 | .80 | -- | -- | -- | 7.6 |
| 440211089365101 | 05-19-86 | -- | -- | -- | -- | 1.2 | .60 | -- | -- | -- | 1.3 |
| | 09-25-86 | -- | -- | -- | -- | 1.0 | .60 | -- | -- | -- | 1.4 |
| 440211089365102 | 05-19-86 | -- | -- | -- | -- | 1.1 | .50 | -- | -- | -- | .70 |
| | 09-25-86 | -- | -- | -- | -- | 1.0 | .50 | -- | -- | -- | 7.6 |
| 450158089364701 | 05-19-86 | 150 | 46 | 33 | 17 | 4.0 | 1.2 | 107 | 2.1 | 14 | 8.9 |
| | 09-25-86 | 150 | 51 | 34 | 17 | 1.7 | .90 | 104 | 2.0 | 15 | 11 |
| | | | | | PORTAGE | | | | | | |
| 441650089305001 | 05-20-86 | -- | -- | -- | -- | .90 | .70 | -- | -- | -- | .70 |
| | 09-23-86 | -- | -- | -- | -- | 1.0 | .70 | -- | -- | -- | 1.6 |
| 441650089305002 | 09-23-86 | -- | -- | -- | -- | 1.0 | .60 | -- | -- | -- | .50 |
| 441651089311101 | 05-20-86 | -- | -- | -- | -- | .80 | .60 | -- | -- | -- | .70 |
| | 09-23-86 | -- | -- | -- | -- | 1.0 | .70 | -- | -- | -- | .60 |
| 441651089311102 | 05-20-86 | -- | -- | -- | -- | 1.7 | .70 | -- | -- | -- | 1.7 |
| | 09-23-86 | -- | -- | -- | -- | 2.0 | .90 | -- | -- | -- | 1.6 |
| 441702089310401 | 05-20-86 | 170 | 110 | 40 | 17 | 3.1 | 3.4 | 60 | 2.9 | 17 | 27 |
| | 09-23-86 | 170 | 120 | 41 | 17 | 3.1 | 4.5 | 54 | 2.1 | 16 | 34 |
| 441704089304101 | 05-20-86 | -- | -- | -- | -- | 4.0 | 1.1 | -- | -- | -- | 81 |
| | 09-23-86 | -- | -- | -- | -- | 5.0 | .90 | -- | -- | -- | 83 |
| 441704089304102 | 05-20-86 | -- | -- | -- | -- | 1.7 | 2.6 | -- | -- | -- | 8.1 |
| | 09-23-86 | -- | -- | -- | -- | 2.0 | 4.4 | -- | -- | -- | 46 |
| 441706089312301 | 05-20-86 | -- | -- | -- | -- | 3.3 | .90 | -- | -- | -- | 47 |
| | 09-23-86 | -- | -- | -- | -- | 2.0 | .70 | -- | -- | -- | 12 |
| 441706089312302 | 05-20-86 | -- | -- | -- | -- | 2.0 | 1.9 | -- | -- | -- | 5.7 |
| | 09-23-86 | -- | -- | -- | -- | 2.0 | 2.0 | -- | -- | -- | 4.8 |
| 441714089310602 | 05-20-86 | -- | -- | -- | -- | 3.0 | 23 | -- | -- | -- | 29 |
| | 09-23-86 | -- | -- | -- | -- | 4.0 | 31 | -- | -- | -- | 70 |
| 442317089415301 | 05-20-86 | -- | -- | -- | -- | 11 | .60 | -- | -- | -- | 53 |
| | 09-23-86 | -- | -- | -- | -- | 14 | .80 | -- | -- | -- | 34 |
| 442317089415302 | 05-20-86 | -- | -- | -- | -- | 1.7 | .60 | -- | -- | -- | 1.6 |
| | 09-23-86 | -- | -- | -- | -- | 1.0 | .70 | -- | -- | -- | 1.2 |
| 442318089404401 | 05-21-86 | -- | -- | -- | -- | 1.9 | .50 | -- | -- | -- | 1.3 |
| | 09-24-86 | -- | -- | -- | -- | 2.0 | .50 | -- | -- | -- | 1.3 |
| 442318089404402 | 05-21-86 | -- | -- | -- | -- | 1.5 | 11 | -- | -- | -- | 19 |
| | 09-24-86 | -- | -- | -- | -- | 1.0 | 14 | -- | -- | -- | 23 |
| 442318089411601 | 05-21-86 | -- | -- | -- | -- | 1.1 | 3.7 | -- | -- | -- | 16 |
| | 09-24-86 | -- | -- | -- | -- | 1.0 | 4.1 | -- | -- | -- | 5.9 |
| 442329089411801 | 05-21-86 | -- | -- | -- | -- | 2.7 | .60 | -- | -- | -- | 68 |
| | 09-24-86 | -- | -- | -- | -- | 3.0 | .50 | -- | -- | -- | 1.6 |
| 442329089411802 | 05-21-86 | -- | -- | -- | -- | .80 | 14 | -- | -- | -- | 1.4 |
| | 09-24-86 | -- | -- | -- | -- | 1.0 | 23 | -- | -- | -- | 3.3 |
| 442329089415301 | 09-23-86 | -- | -- | -- | -- | 6.0 | 1.2 | -- | -- | -- | 5.6 |
| 442330089405801 | 05-21-86 | 100 | 57 | 21 | 12 | 2.3 | 2.8 | 45 | 22 | 21 | 13 |
| | 09-24-86 | 86 | 33 | 18 | 9.9 | 2.1 | 2.2 | 53 | 13 | 23 | 9.8 |
| 442330089413601 | 05-21-86 | 66 | 35 | 17 | 5.6 | 2.6 | 1.1 | 31 | 12 | 17 | 11 |
| | 09-24-86 | 82 | 57 | 21 | 7.1 | 2.8 | 1.9 | 25 | 12 | 19 | 17 |
| 442342089415101 | 05-22-86 | -- | -- | -- | -- | 2.9 | .80 | -- | -- | -- | 5.1 |
| | 09-23-86 | -- | -- | -- | -- | 3.0 | .80 | -- | -- | -- | 6.6 |
| 442342089415102 | 05-21-86 | -- | -- | -- | -- | 1.4 | 1.1 | -- | -- | -- | .70 |
| | 09-23-86 | -- | -- | -- | -- | 1.0 | 1.3 | -- | -- | -- | .70 |
| 442343089404501 | 05-21-86 | -- | -- | -- | -- | 2.0 | .70 | -- | -- | -- | 1.6 |
| | 09-24-86 | -- | -- | -- | -- | 2.0 | .80 | -- | -- | -- | 1.8 |
| 442343089404502 | 05-21-86 | -- | -- | -- | -- | 1.5 | 1.1 | -- | -- | -- | .60 |
| | 09-24-86 | -- | -- | -- | -- | 2.0 | 1.2 | -- | -- | -- | .90 |
| 442343089411501 | 05-21-86 | -- | -- | -- | -- | 1.1 | .60 | -- | -- | -- | .50 |
| | 09-24-86 | -- | -- | -- | -- | 1.0 | .70 | -- | -- | -- | .50 |

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | DATE OF SAMPLE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623) | NITRO-GEN DIS-SOLVED (MG/L AS N) (00602) |
|---|---|---|---|---|---|---|---|
| **ADAMS** | | | | | | | |
| 440146089364402 | 05-19-86 | -- | <.010 | 14 | .010 | .50 | 15 |
| 440151089363001 | 05-19-86 | -- | <.010 | .36 | .040 | .20 | .56 |
| | 09-25-86 | -- | <.010 | .29 | .020 | .20 | .49 |
| 440151089363002 | 05-19-86 | -- | <.010 | 12 | .040 | .80 | 13 |
| 440159089370501 | 05-19-86 | -- | <.010 | 8.9 | .020 | .50 | 9.4 |
| | 09-25-86 | -- | <.010 | 18 | .020 | .70 | 19 |
| 440159089370502 | 05-19-86 | -- | <.010 | 16 | .020 | .70 | 17 |
| | 09-25-86 | -- | <.010 | .44 | .020 | .40 | .84 |
| 440207089363001 | 05-19-86 | -- | <.010 | 2.9 | .040 | .60 | 3.5 |
| | 09-25-86 | -- | <.010 | 2.9 | .030 | 1.0 | 3.9 |
| 440207089363002 | 05-19-86 | -- | <.010 | 3.4 | .050 | .70 | 4.1 |
| | 09-25-86 | -- | <.010 | 9.4 | .030 | .90 | 10 |
| 440211089365101 | 05-19-86 | -- | <.010 | 5.0 | .030 | .90 | 5.9 |
| | 09-25-86 | -- | <.010 | 4.2 | .020 | .30 | 4.5 |
| 440211089365102 | 05-19-86 | -- | <.010 | .19 | .020 | .30 | .49 |
| | 09-25-86 | -- | <.010 | .47 | .020 | <.20 | -- |
| 450158089364701 | 05-19-86 | 181 | <.010 | 7.4 | .020 | .40 | 7.8 |
| | 09-25-86 | 195 | <.010 | 8.0 | .020 | .60 | 8.6 |
| **PORTAGE** | | | | | | | |
| 441650089305001 | 05-20-86 | -- | <.010 | 1.3 | .020 | .40 | 1.7 |
| | 09-23-86 | -- | <.010 | 1.5 | .020 | 6.0 | 7.5 |
| 441650089305002 | 09-23-86 | -- | <.010 | 2.2 | .030 | .40 | 2.6 |
| 441651089311101 | 05-20-86 | -- | <.010 | <.10 | .010 | .20 | -- |
| | 09-23-86 | -- | <.010 | .11 | .020 | <.20 | -- |
| 441651089311102 | 05-20-86 | -- | <.010 | 1.3 | .020 | .40 | 1.7 |
| | 09-23-86 | -- | <.010 | 2.2 | .020 | .60 | 2.8 |
| 441702089310401 | 05-20-86 | 248 | <.010 | 19 | .030 | .70 | 20 |
| | 09-23-86 | 268 | <.010 | 20 | .060 | 1.4 | 21 |
| 441704089304101 | 05-20-86 | -- | <.010 | 43 | .030 | .30 | 43 |
| | 09-23-86 | -- | <.010 | 8.6 | .030 | 1.4 | 10 |
| 441704089304102 | 05-20-86 | -- | <.010 | 5.8 | .020 | .70 | 6.5 |
| | 09-23-86 | -- | <.010 | 23 | .030 | .70 | 24 |
| 441706089312301 | 05-20-86 | -- | <.010 | 27 | .050 | .70 | 28 |
| | 09-23-86 | -- | <.010 | 7.7 | .020 | .40 | 8.1 |
| 441706089312302 | 05-20-86 | -- | <.010 | 12 | .020 | .50 | 13 |
| | 09-23-86 | -- | <.010 | 12 | .020 | .50 | 13 |
| 441714089310602 | 05-20-86 | -- | <.010 | 24 | .040 | .60 | 25 |
| | 09-23-86 | -- | <.010 | 19 | .040 | .70 | 20 |
| 442317089415301 | 05-20-86 | -- | <.010 | <.10 | .220 | .70 | -- |
| | 09-23-86 | -- | <.010 | <.10 | .200 | .40 | -- |
| 442317089415302 | 05-20-86 | -- | <.010 | 1.6 | .010 | .20 | 1.8 |
| | 09-23-86 | -- | <.010 | .87 | .020 | .60 | 1.5 |
| 442318089404401 | 05-21-86 | -- | <.010 | <.10 | .070 | .40 | -- |
| | 09-24-86 | -- | <.010 | <.10 | .050 | <.20 | -- |
| 442318089404402 | 05-21-86 | -- | <.010 | 24 | .020 | .80 | 25 |
| | 09-24-86 | -- | <.100 | 19 | .020 | .70 | 20 |
| 442318089411601 | 05-21-86 | -- | <.010 | 6.0 | .040 | 1.1 | 7.1 |
| | 09-24-86 | -- | <.010 | 9.4 | .030 | .70 | 10 |
| 442329089411801 | 05-21-86 | -- | <.010 | <.10 | .160 | .50 | -- |
| | 09-24-86 | -- | <.010 | <.10 | .150 | .50 | -- |
| 442329089411802 | 05-21-86 | -- | <.010 | 1.4 | .050 | .40 | 1.8 |
| | 09-24-86 | -- | <.010 | 10 | .020 | .80 | 11 |
| 442329089415301 | 09-23-86 | -- | <.010 | .70 | .030 | .30 | 1.0 |
| 442330089405801 | 05-21-86 | 163 | .030 | 6.1 | .130 | 1.0 | 7.1 |
| | 09-24-86 | 134 | <.010 | 1.5 | .070 | .40 | 1.9 |
| 442330089413601 | 05-21-86 | 126 | <.010 | 2.4 | .090 | .50 | 2.9 |
| | 09-24-86 | 154 | <.010 | 5.3 | .120 | 1.1 | 6.4 |
| 442342089415101 | 05-22-86 | -- | < 010 | <.10 | .160 | .60 | -- |
| | 09-23-86 | -- | <.010 | <.10 | .150 | .60 | -- |
| 442342089415102 | 05-21-86 | -- | <.010 | .71 | .020 | .20 | .91 |
| | 09-23-86 | -- | <.010 | 2.0 | .020 | .50 | 2.5 |
| 442343089404501 | 05-21-86 | -- | <.010 | <.10 | .090 | .30 | -- |
| | 09-24-86 | -- | <.010 | <.10 | .080 | .30 | -- |
| 442343089404502 | 05-21-86 | -- | <.010 | .10 | .040 | .40 | .50 |
| | 09-24-86 | -- | <.010 | <.10 | .050 | .90 | -- |
| 442343089411501 | 05-21-86 | -- | <.010 | <.10 | .040 | .30 | -- |
| | 09-24-86 | -- | <.010 | .13 | .050 | .50 | .63 |

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | LOCAL IDENT- I- FIER | GEO- LOGIC UNIT | DATE OF SAMPLE | DEPTH OF WELL, TOTAL (FEET) (72008) | SPE- CIFIC CON- DUC- TANCE (US/CM) (00095) | PH (STAND- ARD UNITS) (00400) | TEMPER- ATURE (DEG C) (00010) | TUR- BID- ITY (NTU) (00076) | OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340) |
|---|---|---|---|---|---|---|---|---|---|
| | | | WOOD | | | | | | |
| 441525089503801 | WD-21/05E/36-0559 | 110QRNR | 08-29-86 | 62.00 | 130 | 8.10 | 10.0 | .20 | -- |
| 441646089575201 | WD-21/04E/24-0672 | 110QRNR | 08-29-86 | 58.00 | 140 | 6.50 | 10.5 | 7.7 | -- |
| 441706089553101 | WD-21/05E/20-0689 | 110QRNR | 08-29-86 | 72.00 | 165 | 6.40 | 11.5 | 40 | -- |
| 441732089543401 | WD-21/05E/21-0690 | 400BCPX | 09-02-86 | 300 | 430 | 7.30 | 12.0 | 6.9 | -- |
| 441739089513801 | WD-21/05E/13-0564 | 110QRNR | 09-02-86 | 57.00 | 235 | 7.20 | 15.0 | 2.1 | -- |
| 441934089553201 | WD-21/05E/05-0681 | 400BCPX | 09-02-86 | 103 | 225 | 6.80 | 11.0 | 31 | -- |
| 442016089544701 | WD-22/05E/33-0696 | 400BCPX | 08-29-86 | 70.00 | 210 | 6.40 | 11.5 | 27 | -- |
| 442043089581801 | WD-22/04E/36-0090 | 110QRNR | 08-28-86 | 44.00 | 360 | 6.80 | -- | 50 | -- |
| 442049090184501 | WD-22/02E/31-0771 | 372EKMD | 06-30-86 | 40.00 | 102 | 6.40 | 9.5 | 25 | -- |
| 442055090001101 | WD-22/04E/35-0763 | 400BCPX | 08-28-86 | 420 | 450 | 7.10 | 10.5 | 50 | -- |
| 442121089591101 | WD-22/04E/26-0694 | 400BCPX | 08-28-86 | 267 | 340 | 7.40 | 11.0 | 24 | -- |
| 442121089591102 | WD-22/04E/26-0695 | 400BCPX | 08-28-86 | 90.00 | 305 | 7.00 | 10.0 | 8.2 | -- |
| 442122089492701 | WD-22/06E/29-0575 | 400BCPX | 09-03-86 | 124 | 425 | 6.60 | 10.5 | 26 | -- |
| 442123089484501 | WD-22/06E/29-0577 | 110QRNR | 09-03-86 | 55.00 | 280 | 6.30 | 12.0 | .70 | -- |
| 442130089435901 | WD-22/06E/25-0554 | 110QRNR | 09-03-86 | 46.00 | 110 | 6.40 | 10.0 | 12 | -- |
| 442140090013301 | WD-22/04E/28-0761 | 372EKMD | 08-28-86 | 35.00 | 690 | 5.00 | 12.0 | .20 | -- |
| 442207089530301 | WD-22/05E/23-0699 | 400BCPX | 08-28-86 | 70.00 | 180 | 6.90 | 11.0 | 35 | -- |
| 442243090022001 | WD-22/04E/21-0797 | 400BCPX | 08-28-86 | 61.00 | 75 | 4.90 | 11.0 | .50 | -- |
| 442340090110901 | WD-22/03E/18-0791 | 400BCPX | 06-29-86 | 76.00 | 230 | 6.60 | 14.0 | 25 | -- |
| 442351090072101 | WD-22/03E/10-0783 | 400BCPX | 06-29-86** | 160 | 169 | 6.70 | 11.0 | 17 | -- |
| | | 400BCPX | 06-29-86** | 160 | 169 | 6.70 | 11.0 | 15 | -- |
| 442356089544601 | WD-22/05E/09-0804 | 372EKMD | 08-28-86 | 58.00 | 190 | 6.20 | 10.5 | .40 | -- |
| 442413089555101 | WD-22/05E/08-1251 | 110QRNR | 06-20-86 | 7.80 | 545 | 6.10 | 15.0 | -- | 25 |
| 442413089555501 | WD-22/05E/08-1250 | 110QRNR | 06-20-86 | 8.00 | 950 | 6.60 | 15.0 | -- | 74 |
| 442415089555301 | WD-22/05E/08-1249 | 110QRNR | 06-20-86 | 14.50 | 40 | 5.00 | 11.0 | -- | <10 |
| 442430090155001 | WD-22/02E/04-1257 | 110QRNR | 06-19-86 | 15.00 | 185 | 6.70 | 12.5 | -- | 11 |
| 442432089595701 | WD-22/04E/11-0796 | 372EKMD | 08-28-86 | 35.00 | 85 | 6.50 | 12.5 | .30 | -- |
| 442436090155401 | WD-22/02E/04-1233 | 110QRNR | 06-19-86 | 16.60 | 165 | 6.70 | 12.0 | -- | 24 |
| 442438090155201 | WD-22/02E/04-1234 | 110QRNR | 06-19-86 | 12.30 | 185 | 6.70 | 12.5 | -- | 22 |
| 442439090160701 | WD-22/02E/04-0765 | 400BCPX | 08-28-86 | 220 | 390 | 7.20 | 11.5 | 1.1 | -- |
| 442441089472601 | WD-22/06E/04-0707 | 400BCPX | 09-03-86** | 128 | 215 | 6.70 | 10.0 | 24 | -- |
| | | 400BCPX | 09-03-86** | 128 | 215 | 6.70 | 10.0 | 25 | -- |
| 442441089540401 | WD-22/05E/03-0798 | 400BCPX | 08-28-86 | 83.00 | 110 | 5.40 | 10.5 | .30 | -- |
| 442442090105201 | WD-22/03E/06-0778 | 400BCPX | 06-29-86 | 80.00 | 175 | 7.20 | 11.0 | 50 | -- |
| 442447089531401 | WD-22/05E/03-0799 | 400BCPX | 08-28-86 | 80.00 | 350 | 6.60 | 10.0 | 45 | -- |
| 442447089595401 | WD-22/04E/02-0794 | 400BCPX | 08-28-86 | 68.00 | 150 | 7.20 | 11.0 | 7.1 | -- |
| 442530089483201 | WD-23/06E/32-0748 | 400BCPX | 08-27-86 | 68.00 | 370 | 6.40 | 12.0 | 130 | -- |
| 442530090124601 | WD-23/02E/36-0825 | 400BCPX | 06-29-86 | 60.00 | 260 | 6.90 | 12.0 | 24 | -- |
| 442541090065701 | WD-23/03E/35-0853 | 400BCPX | 06-28-86 | 143 | 258 | 6.90 | 13.0 | 8.5 | -- |
| 442553089575601 | WD-23/04E/36-0887 | 400BCPX | 08-26-86 | 55.00 | 180 | 6.50 | 12.0 | 60 | -- |
| 442612089574101 | WD-23/05E/31-0907 | 372EKMD | 08-26-86 | 41.00 | 280 | 7.00 | 14.0 | .20 | -- |
| 442620090043101 | WD-23/04E/30-0886 | 110QRNR | 08-26-86 | 40.00 | 725 | 5.90 | 11.5 | 28 | -- |
| 442620090043301 | WD-23/04E/30-0885 | 400BCPX | 08-26-86 | 325 | 825 | 6.30 | 10.5 | 55 | -- |
| 442640089501101 | WD-23/06E/30-0744 | 400BCPX | 08-27-86 | 79.00 | 345 | 6.90 | 10.0 | 3.3 | -- |
| 442643090142601 | WD-23/02E/27-0822 | 400BCPX | 08-22-86 | 148 | 175 | 6.90 | 16.0 | 1.7 | -- |
| 442704089530301 | WD-23/05E/26-0904 | 400BCPX | 08-27-86 | 110 | 485 | 6.70 | 9.5 | .20 | -- |
| 442705089435201 | WD-23/06E/25-0737 | 400BCPX | 08-27-86 | 128 | 620 | 6.60 | 10.0 | 22 | -- |
| 442705089440701 | WD-23/06E/25-0738 | 400BCPX | 08-27-86 | 90.00 | 325 | 6.70 | 10.0 | 26 | -- |
| 442723090153101 | WD-23/02E/22-1238 | 110QRNR | 06-19-86 | 12.75 | 205 | 5.20 | 12.5 | -- | 85 |
| 442723090153301 | WD-23/02E/22-1237 | 110QRNR | 06-19-86 | 16.20 | 270 | 5.80 | 13.5 | -- | 26 |
| 442725090153301 | WD-23/02E/04-1236 | 110QRNR | 06-19-86 | 12.60 | 37 | 5.30 | 12.0 | -- | 28 |
| 442744090164601 | WD-23/02E/21-0817 | 400BCPX | 08-21-86 | 95.00 | 480 | 6.50 | 13.0 | 18 | -- |
| 442755089474201 | WD-23/06E/21-0734 | 400BCPX | 08-27-86 | 143 | 205 | 6.00 | 9.5 | .40 | -- |
| 442804089573901 | WD-23/05E/18-0901 | 400BCPX | 08-26-86 | 118 | 100 | 6.20 | 11.0 | .20 | -- |
| 442804090074501 | WD-23/03E/22-0844 | 400BCPX | 06-29-86 | 70.00 | 413 | 6.70 | 12.0 | 65 | -- |
| 442808090094101 | WD-23/03E/17-0840 | 400BCPX | 06-29-86 | 89.00 | 245 | 7.30 | 9.5 | 8.0 | -- |
| 442818090054701 | WD-23/03E/13-0836 | 400BCPX | 06-30-86** | 62.00 | 109 | 6.60 | 11.0 | 65 | -- |
| | | 400BCPX | 06-30-86** | 62.00 | 109 | 6.50 | 11.0 | 70 | -- |
| 442848089493601 | WD-23/06E/17-0731 | 400BCPX | 08-27-86 | 115 | 215 | 6.60 | 10.0 | 50 | -- |
| 442858089435201 | WD-23/06E/12-0726 | 400BCPX | 08-27-86 | 67.00 | 50 | 5.80 | 10.5 | 4.2 | -- |
| 442916089590301 | WD-23/04E/11-0866 | 400BCPX | 08-26-86 | 52.00 | 55 | 5.70 | 12.0 | 19 | -- |
| 442921090133901 | WD-23/02E/11-0813 | 400BCPX | 06-29-86 | 188 | 392 | 7.50 | 10.5 | 2.6 | -- |
| 442949090053301 | WD-23/03E/01-0828 | 400BCPX | 06-29-86 | 88.00 | 397 | 7.30 | 11.0 | 1.7 | -- |
| 442950089540301 | WD-23/05E/03-0894 | 372EKMD | 08-22-86 | 62.00 | 370 | 6.50 | 9.0 | 34 | -- |
| 442951089475301 | WD-23/06E/04-0714 | 400BCPX | 08-27-86 | 206 | 360 | 7.40 | 10.0 | .60 | -- |
| 443022090133001 | WD-23/02E/02-0826 | 372EKMD | 06-29-86 | 83.00 | 103 | 6.60 | 11.0 | 1.0 | -- |
| 443024090175501 | WD-23/02E/05-0860 | 400BCPX | 06-29-86 | 80.00 | 353 | 7.40 | 16.0 | 1.2 | -- |
| 443035089574801 | WD-23/05E/06-0897 | 400BCPX | 08-22-86** | 194 | 255 | 6.10 | 10.0 | 60 | -- |
| | | 400BCPX | 08-22-86** | 194 | 255 | 6.10 | 10.0 | 50 | -- |
| 443039089530301 | WD-23/05E/02-0891 | 400BCPX | 08-22-86 | 122 | 490 | 6.40 | 10.0 | 95 | -- |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | DATE OF SAMPLE | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | WOOD | | | | | | |
| 441525089503801 | 08-29-86 | 58 | 7 | 13 | 6.2 | -- | -- | 51 | .8 | -- | 1.8 |
| 441646089575201 | 08-29-86 | 52 | 9 | 12 | 5.3 | -- | -- | 43 | 26 | -- | 1.3 |
| 441706089553101 | 08-29-86 | 58 | 11 | 13 | 6.1 | -- | -- | 47 | 36 | -- | 3.9 |
| 441732089543401 | 09-02-86 | 170 | 16 | 49 | 12 | -- | -- | 156 | 15 | -- | 28 |
| 441739089513801 | 09-02-86 | 120 | 4 | 27 | 12 | -- | -- | 113 | 14 | -- | 2.0 |
| 441934089553201 | 09-02-86 | 110 | 5 | 27 | 9.7 | -- | -- | 103 | 32 | -- | 1.9 |
| 442016089544701 | 08-29-86 | 87 | 0 | 23 | 7.3 | -- | -- | 88 | 68 | -- | 2.7 |
| 442043089581801 | 08-28-86 | 180 | 0 | 48 | 14 | -- | -- | 191 | 59 | -- | 2.5 |
| 442049090184501 | 06-30-86 | 36 | 0 | 7.9 | 3.9 | -- | -- | 39 | 30 | -- | 1.4 |
| 442055090001101 | 08-28-86 | 220 | 9 | 60 | 16 | -- | -- | 207 | 32 | -- | 120 |
| 442121089591101 | 08-28-86 | 150 | 0 | 45 | 8.6 | -- | -- | 159 | 12 | -- | 5.8 |
| 442121089591102 | 08-28-86 | 150 | 0 | 42 | 10 | -- | -- | 151 | 29 | -- | 3.6 |
| 442122089492701 | 09-03-86 | 180 | 78 | 48 | 14 | -- | -- | 100 | 49 | -- | 47 |
| 442123089484501 | 09-03-86 | 58 | 24 | 14 | 5.7 | -- | -- | 35 | 34 | -- | 27 |
| 442130089435901 | 09-03-86 | 33 | 11 | 7.9 | 3.3 | -- | -- | 22 | 17 | -- | 4.2 |
| 442140090013301 | 08-28-86 | 57 | 54 | 15 | 4.7 | -- | -- | 3.0 | 58 | -- | 200 |
| 442207089530301 | 08-28-86 | 73 | 9 | 19 | 6.3 | -- | -- | 64 | 16 | -- | 3.1 |
| 442243090022001 | 08-28-86 | 15 | 12 | 3.8 | 1.4 | -- | -- | 3.0 | 73 | -- | 8.8 |
| 442340090110901 | 06-29-86 | 97 | 11 | 24 | 9.1 | -- | -- | 87 | 42 | -- | 9.8 |
| 442351090072101 | 06-29-86** | 68 | 0 | 16 | 6.8 | -- | -- | 68 | 26 | -- | 2.1 |
| | 06-29-86** | 68 | 0 | 16 | 6.9 | -- | -- | 69 | 27 | -- | 2.1 |
| 442356089544601 | 08-28-86 | 94 | 51 | 35 | 1.6 | -- | -- | 43 | 53 | -- | 7.5 |
| 442413089555101 | 06-20-86 | 210 | 100 | 59 | 15 | 10 | 17 | 106 | 163 | 130 | 9.7 |
| 442413089555501 | 06-20-86 | 380 | 52 | 110 | 26 | 16 | 35 | 330 | 161 | 100 | 14 |
| 442415089555301 | 06-20-86 | 11 | 8 | 2.7 | 1.0 | 1.0 | 1.3 | 3.0 | 58 | 12 | 1.1 |
| 442430090155001 | 06-19-86 | 39 | 0 | 12 | 2.2 | 1.2 | 2.7 | 45 | 17 | 1.6 | 1.0 |
| 442432089595701 | 08-28-86 | 31 | 14 | 7.0 | 3.3 | -- | -- | 17 | 10 | -- | 6.4 |
| 442436090155401 | 06-19-86 | 60 | 1 | 13 | 6.7 | 2.7 | 2.8 | 59 | 23 | 9.5 | 1.7 |
| 442438090155201 | 06-19-86 | 39 | 0 | 12 | 2.2 | 1.2 | 2.6 | 41 | 16 | .7 | 1.1 |
| 442439090160701 | 08-28-86 | 31 | 0 | 3.5 | 5.5 | -- | -- | 82 | 10 | -- | 62 |
| 442441089472601 | 09-03-86** | 90 | 14 | 25 | 6.6 | -- | -- | 76 | 29 | -- | 10 |
| | 09-03-86** | 90 | 15 | 25 | 6.7 | -- | -- | 75 | 29 | -- | 10 |
| 442441089540401 | 08-28-86 | 36 | 32 | 9.0 | 3.4 | -- | -- | 5.0 | 39 | -- | 3.7 |
| 442442090105201 | 06-29-86 | 55 | 0 | 13 | 5.5 | -- | -- | 67 | 8.2 | -- | 4.8 |
| 442447089531401 | 08-28-86 | 140 | 66 | 40 | 8.8 | -- | -- | 70 | 34 | -- | 24 |
| 442447089595401 | 08-28-86 | 65 | 0 | 15 | 6.8 | -- | -- | 73 | 8.9 | -- | 1.2 |
| 442530089483201 | 08-27-86 | 88 | 76 | 23 | 7.4 | -- | -- | 12 | 9.3 | -- | 60 |
| 442530090124601 | 06-29-86 | 120 | 0 | 27 | 12 | -- | -- | 120 | 29 | -- | 5.1 |
| 442541090065701 | 06-28-86 | 97 | 0 | 25 | 8.4 | -- | -- | 111 | 27 | -- | 1.0 |
| 442553089575601 | 08-26-86 | 69 | 16 | 19 | 5.2 | -- | -- | 53 | 32 | -- | 3.8 |
| 442612089574101 | 08-26-86 | 140 | 11 | 31 | 15 | -- | -- | 128 | 25 | -- | 1.2 |
| 442620090043101 | 08-26-86 | 190 | 140 | 45 | 19 | -- | -- | 53 | 129 | -- | 120 |
| 442620090043301 | 08-26-86 | 370 | 130 | 93 | 33 | -- | -- | 234 | 227 | -- | 95 |
| 442640089501101 | 08-27-86 | 150 | 35 | 36 | 14 | -- | -- | 113 | 28 | -- | 20 |
| 442643090142601 | 08-22-86 | 80 | 0 | 18 | 8.6 | -- | -- | 90 | 22 | -- | 20 |
| 442704089530301 | 08-27-86 | 200 | 27 | 44 | 21 | -- | -- | 170 | 66 | -- | 34 |
| 442705089435201 | 08-27-86 | 200 | 130 | 45 | 22 | -- | -- | 76 | 37 | -- | 130 |
| 442705089440701 | 08-27-86 | 140 | 36 | 38 | 11 | -- | -- | 104 | 40 | -- | 25 |
| 442723090153101 | 06-19-86 | 33 | 30 | 6.3 | 4.2 | 12 | 4.0 | 3.0 | 37 | 8.0 | 38 |
| 442723090153301 | 06-19-86 | 41 | 22 | 9.5 | 4.3 | 6.5 | 5.0 | 19 | 58 | 5.4 | 27 |
| 442725090153301 | 06-19-86 | 7 | 4 | 1.6 | .66 | .60 | 1.4 | 3.0 | 29 | 9.2 | .70 |
| 442744090164601 | 08-21-86 | 200 | 16 | 50 | 18 | -- | -- | 183 | 112 | -- | 26 |
| 442755089474201 | 08-27-86 | 68 | 30 | 15 | 7.5 | -- | -- | 38 | 74 | -- | 14 |
| 442804089573901 | 08-26-86 | 36 | 8 | 9.0 | 3.4 | -- | -- | 29 | 35 | -- | 4.4 |
| 442804090074501 | 06-29-86 | 130 | 29 | 36 | 9.9 | -- | -- | 102 | 39 | -- | 29 |
| 442808090094101 | 06-29-86 | 92 | 5 | 23 | 8.3 | -- | -- | 87 | 8.4 | -- | 11 |
| 442818090054701 | 06-30-86** | 29 | 0 | 7.3 | 2.6 | -- | -- | 33 | 16 | -- | 2.8 |
| | 06-30-86** | 29 | 0 | 7.4 | 2.6 | -- | -- | 33 | 16 | -- | 2.8 |
| 442848089493601 | 08-27-86 | 87 | 0 | 22 | 7.8 | -- | -- | 99 | 48 | -- | .90 |
| 442858089435201 | 08-27-86 | 13 | 0 | 2.9 | 1.5 | -- | -- | 16 | 49 | -- | 1.2 |
| 442916089590301 | 08-26-86 | 13 | 3 | 3.2 | 1.2 | -- | -- | 10 | 39 | -- | 1.4 |
| 442921090133901 | 06-29-86 | 110 | 0 | 28 | 10 | -- | -- | 153 | 9.4 | -- | 13 |
| 442949090053301 | 06-29-86 | 170 | 7 | 43 | 16 | -- | -- | 166 | 16 | -- | 14 |
| 442950089540301 | 08-22-86 | 160 | 35 | 47 | 10 | -- | -- | 124 | 76 | -- | 29 |
| 442951089475301 | 08-27-86 | 190 | 8 | 38 | 22 | -- | -- | 178 | 14 | -- | 4.3 |
| 443022090133001 | 06-29-86 | 34 | 8 | 8.3 | 3.2 | -- | -- | 26 | 13 | -- | 2.4 |
| 443024090175501 | 06-29-86 | -- | -- | .11 | <.01 | -- | -- | 163 | 13 | -- | 4.7 |
| 443035089574801 | 08-22-86** | 100 | 31 | 23 | 11 | -- | -- | 72 | 111 | -- | 20 |
| | 08-22-86** | 100 | 82 | 23 | 11 | -- | -- | 21 | 32 | -- | 20 |
| 443039089530301 | 08-22-86 | 190 | 62 | 48 | 17 | -- | -- | 128 | 99 | -- | 54 |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | DATE OF SAMPLE | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631) | IRON, DIS- SOLVED (UG/L AS FE) (01046) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|
| WOOD | | | | | | | |
| 441525089503801 | 08-29-86 | -- | -- | .15 | 27 | -- | -- |
| 441646089575201 | 08-29-86 | -- | -- | .72 | 930 | -- | -- |
| 441706089553101 | 08-29-86 | -- | -- | <.10 | 6000 | -- | -- |
| 441732089543401 | 09-02-86 | -- | -- | <.10 | 840 | -- | -- |
| 441739089513801 | 09-02-86 | -- | -- | <.10 | 270 | -- | -- |
| 441934089553201 | 09-02-86 | -- | -- | <.10 | 2600 | -- | -- |
| 442016089544701 | 08-29-86 | -- | -- | <.10 | 3800 | -- | -- |
| 442043089581801 | 08-28-86 | -- | -- | <.10 | 5100 | -- | -- |
| 442049090184501 | 06-30-86 | -- | -- | <.10 | 9000 | -- | -- |
| 442055090001101 | 08-28-86 | -- | -- | <.10 | 4900 | -- | -- |
| 442121089591101 | 08-28-86 | -- | -- | <.10 | 1600 | -- | -- |
| 442121089591102 | 08-28-86 | -- | -- | <.10 | 1900 | -- | -- |
| 442122089492701 | 09-03-86 | -- | -- | <.10 | 2200 | -- | -- |
| 442123089484501 | 09-03-86 | -- | -- | 4.5 | 100 | -- | -- |
| 442130089435901 | 09-03-86 | -- | -- | 1.2 | 3200 | -- | -- |
| 442140090013301 | 08-28-86 | -- | -- | .87 | 160 | -- | -- |
| 442207089530301 | 08-28-86 | -- | -- | <.10 | 4500 | -- | -- |
| 442243090022001 | 08-28-86 | -- | -- | .21 | 150 | -- | -- |
| 442340090110901 | 06-29-86 | -- | -- | <.10 | 3400 | -- | -- |
| 442351090072101 | 06-29-86** | -- | -- | <.10 | 3300 | -- | -- |
| | 06-29-86** | -- | -- | <.10 | 3300 | -- | -- |
| 442356089544601 | 08-28-86 | -- | -- | 2.1 | 190 | -- | -- |
| 442413089555101 | 06-20-86 | 314 | <.010 | <.10 | 5400 | 360 | -- |
| 442413089555501 | 06-20-86 | 551 | <.010 | <.10 | 37000 | 710 | -- |
| 442415089555301 | 06-20-86 | 31 | <.010 | <.10 | 120 | 38 | -- |
| 442430090155001 | 06-19-86 | 71 | <.010 | <.10 | 18000 | 1100 | -- |
| 442432089595701 | 08-28-86 | -- | -- | 3.8 | 14 | -- | -- |
| 442436090155401 | 06-19-86 | 85 | <.010 | <.10 | 550 | 120 | -- |
| 442438090155201 | 06-19-86 | 80 | <.010 | <.10 | 18000 | 1100 | -- |
| 442439090160701 | 08-28-86 | -- | -- | .11 | 150 | -- | -- |
| 442441089472601 | 09-03-86** | -- | -- | <.10 | 2400 | -- | -- |
| | 09-03-86** | -- | -- | <.10 | 2400 | -- | -- |
| 442441089540401 | 08-28-86 | -- | -- | 3.5 | 83 | -- | -- |
| 442442090105201 | 06-29-86 | -- | -- | <.10 | 5500 | -- | -- |
| 442447089531401 | 08-28-86 | -- | -- | <.10 | 5500 | -- | -- |
| 442447089595401 | 08-28-86 | -- | -- | <.10 | 1300 | -- | -- |
| 442530089483201 | 08-27-86 | -- | -- | <.10 | 25000 | -- | -- |
| 442530090124601 | 06-29-86 | -- | -- | <.10 | 3700 | -- | -- |
| 442541090065701 | 06-28-86 | -- | -- | <.10 | 1000 | -- | -- |
| 442553089575601 | 08-26-86 | -- | -- | <.10 | 5300 | -- | -- |
| 442612089574101 | 08-26-86 | -- | -- | <.10 | 29 | -- | -- |
| 442620090043101 | 08-26-86 | -- | -- | 14 | 25 | -- | -- |
| 442620090043301 | 08-26-86 | -- | -- | <.10 | 50 | -- | -- |
| 442640089501101 | 08-27-86 | -- | -- | .31 | 270 | -- | -- |
| 442643090142601 | 08-22-86 | -- | -- | <.10 | 190 | -- | -- |
| 442704089530301 | 08-27-86 | -- | -- | 1.1 | 120 | -- | -- |
| 442705089435201 | 08-27-86 | -- | -- | <.10 | 2200 | -- | -- |
| 442705089440701 | 08-27-86 | -- | -- | <.10 | 2900 | -- | -- |
| 442723090153101 | 06-19-86 | 111 | <.010 | <.10 | 7600 | 81 | -- |
| 442723090153301 | 06-19-86 | 109 | <.010 | <.10 | 4600 | 130 | -- |
| 442725090153301 | 06-19-86 | 25 | <.010 | <.10 | 1100 | 44 | -- |
| 442744090164601 | 08-21-86 | -- | -- | <.10 | 3800 | -- | -- |
| 442755089474201 | 08-27-86 | -- | -- | 1.9 | 140 | -- | -- |
| 442804089573901 | 08-26-86 | -- | -- | 2.8 | 61 | -- | -- |
| 442804090074501 | 06-29-86 | -- | -- | <.10 | 8400 | -- | -- |
| 442808090094101 | 06-29-86 | -- | -- | <.10 | 1400 | -- | -- |
| 442818090054701 | 06-30-86** | -- | -- | <.10 | 8000 | -- | -- |
| | 06-30-86** | -- | -- | <.10 | 8100 | -- | -- |
| 442848089493601 | 08-27-86 | -- | -- | <.10 | 5600 | -- | -- |
| 442858089435201 | 08-27-86 | -- | -- | 1.0 | 33 | -- | -- |
| 442916089590301 | 08-26-86 | -- | -- | <.10 | 2500 | -- | -- |
| 442921090133901 | 06-29-86 | -- | -- | <.10 | 350 | -- | -- |
| 442949090053301 | 06-29-86 | -- | -- | .53 | 9 | -- | -- |
| 442950089540301 | 08-22-86 | -- | -- | <.10 | 4100 | -- | -- |
| 442951089475301 | 08-27-86 | -- | -- | <.10 | 67 | -- | -- |
| 443022090133001 | 06-29-86 | -- | -- | 2.9 | 9 | -- | -- |
| 443024090175501 | 06-29-86 | -- | -- | <.10 | 6 | -- | -- |
| 443035089574801 | 08-22-86** | -- | -- | <.10 | 720 | -- | -- |
| | 08-22-86** | -- | -- | <.10 | 570 | -- | -- |
| 443039089530301 | 08-22-86 | -- | -- | <.10 | 11000 | -- | -- |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

WOOD

| STATION NUMBER | LOCAL IDENT- I- FIER | GEO- LOGIC UNIT | DATE OF SAMPLE | DEPTH OF WELL, TOTAL (FEET) (72008) | SPE- CIFIC CON- DUC- TANCE (US/CM) (00095) | PH (STAND- ARD UNITS) (00400) | TEMPER- ATURE (DEG C) (00010) | TUR- BID- ITY (NTU) (00076) | OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340) |
|---|---|---|---|---|---|---|---|---|---|
| 443039090035201 | WD-23/04E/05-0862 | 400BCPX | 08-26-86 | 120 | 150 | 6.30 | 11.0 | .30 | -- |
| 443046089510101 | WD-24/05E/36-1081 | 400BCPX | 08-20-86 | 70.00 | 455 | 6.50 | 10.0 | 34 | -- |
| 443051090081501 | WD-24/03E/34-0997 | 400BCPX | 08-21-86 | 98.00 | 205 | 6.50 | 9.0 | 3.5 | -- |
| 443057090131101 | WD-24/02E/35-0952 | 400BCPX | 06-28-86 | 150 | 203 | 7.40 | 10.0 | 1.3 | -- |
| 443100089590501 | WD-24/04E/35-1044 | 400BCPX | 08-20-86 | 60.00 | 475 | 6.10 | 9.0 | 70 | -- |
| 443108090010401 | WD-24/04E/34-1043 | 400BCPX | 08-21-86 | 263 | 215 | 6.40 | 10.0 | 3.9 | -- |
| 443110090104401 | WD-24/03E/32-0994 | 400BCPX | 06-28-86 | 130 | 370 | 7.50 | 11.0 | 2.8 | -- |
| 443120089553301 | WD-24/05E/32-1077 | 400BCPX | 08-21-86 | 130 | 470 | 6.70 | 40.0 | 18 | -- |
| 443145089574701 | WD-24/05E/30-1076 | 400BCPX | 08-21-86 | 115 | 510 | 6.50 | 10.0 | 1.1 | -- |
| 443148090041701 | WD-24/04E/30-1041 | 400BCPX | 08-21-86 | 250 | 145 | 6.30 | 14.5 | 3.4 | -- |
| 443148090162201 | WD-24/02E/28-0946 | 400BCPX | 06-28-86 | 80.00 | 125 | 7.00 | 12.0 | 3.8 | -- |
| 443152090050701 | WD-24/03E/25-0989 | 400BCPX | 08-21-86 | 63.00 | 170 | 6.30 | 10.0 | 6.4 | -- |
| 443156090055901 | WD-24/03E/26-0990 | 400BCPX | 08-21-86 | 300 | 410 | 6.50 | 10.0 | .30 | -- |
| 443201090014601 | WD-24/04E/28-1255 | 110QRNR | 06-17-86 | 22.70 | 3770 | 5.80 | 9.5 | -- | 44 |
| 443202090014201 | WD-24/04E/28-1253 | 110QRNR | 06-17-86 | 16.80 | 580 | 5.30 | 10.0 | -- | 14 |
| 443203090014401 | WD-24/04E/28-1254 | 110QRNR | 06-17-86 | 17.30 | 230 | 5.80 | 11.0 | -- | 110 |
| 443203090132801 | WD-24/02E/26-0944 | 400BCPX | 08-22-86 | 54.00 | 50 | 5.90 | 10.0 | 1.0 | -- |
| 443222089514501 | WD-24/05E/25-1074 | 400BCPX | 08-20-86 | 85.00 | 195 | 6.30 | 10.0 | 60 | -- |
| 443227089545101 | WD-24/05E/21-1243 | 110QRNR | 06-17-86 | 12.00 | 315 | 6.50 | 11.5 | -- | 110 |
| 443227089545501 | WD-24/05E/21-1242 | 110QRNR | 06-16-86 | 9.80 | 315 | 5.20 | 13.0 | -- | 24 |
| 443229089545501 | WD-24/05E/21-1244 | 110QRNR | 06-17-86 | 7.40 | 130 | 4.90 | 12.5 | -- | 32 |
| 443238089590601 | WD-24/04E/23-1032 | 400BCPX | 08-20-86 | 110 | 380 | 6.40 | 10.0 | .40 | -- |
| 443240090082101 | WD-24/03E/22-0985 | 400BCPX | 06-28-86 | 83.00 | 235 | 7.10 | 12.5 | 10 | -- |
| 443246090142201 | WD-24/02E/22-0938 | 400BCPX | 06-28-86 | 145 | 295 | 7.90 | 10.0 | 2.0 | -- |
| 443320090070201 | WD-24/03E/14-1240 | 110QRNR | 06-18-86 | 9.00 | 810 | 5.10 | 12.5 | -- | -- |
| 443320090070601 | WD-24/03E/14-1239 | 110QRNR | 06-18-86 | 12.10 | 585 | 5.70 | 11.5 | -- | 27 |
| 443323090163501 | WD-24/02E/16-0929 | 372EKMD | 06-28-86 | 52.00 | 95 | 6.50 | 10.0 | 1.0 | -- |
| 443331090012801 | WD-24/04E/15-1016 | 400BCPX | 08-20-86 | 220 | 375 | 6.60 | 10.0 | 1.2 | -- |
| 443332090105001 | WD-24/03E/18-0980 | 400BCPX | 06-28-86 | 173 | 236 | 7.10 | 10.5 | 5.0 | -- |
| 443355090040601 | WD-24/04E/18-1024 | 400BCPX | 08-20-86 | 353 | 340 | 6.50 | 14.0 | 26 | -- |
| 443404089590501 | WD-24/04E/14-1015 | 400BCPX | 08-20-86 | 95.00 | 235 | 6.40 | 10.0 | .20 | -- |
| 443411090051201 | WD-24/03E/12-0974 | 400BCPX | 06-28-86** | 68.00 | 383 | 7.20 | 11.0 | 20 | -- |
|  |  | 400BCPX | 06-28-86** | 68.00 | 383 | 7.20 | 11.0 | 32 | -- |
| 443413090182401 | WD-24/02E/18-0931 | 400BCPX | 06-28-86 | 72.00 | 205 | 7.00 | 12.0 | 1.0 | -- |
| 443503090132601 | WD-24/02E/11-0925 | 372EKMD | 06-28-86 | 54.00 | 73 | 6.30 | 12.5 | 1.3 | -- |
| 443530090175501 | WD-24/02E/06-0921 | 372EKMD | 06-28-86 | 142 | 285 | 7.30 | 10.0 | 1.5 | -- |
| 443540090093401 | WD-24/03E/04-0960 | 400BCPX | 06-28-86 | 80.00 | 142 | 7.10 | 10.0 | 1.5 | -- |
| 443555090112701 | WD-25/03E/31-1154 | 372EKMD | 06-28-86 | 62.00 | 468 | 7.00 | 10.0 | .50 | -- |
| 443556089555701 | WD-25/05E/32-1227 | 400BCPX | 08-19-86 | 85.00 | 260 | 6.40 | 10.0 | .60 | -- |
| 443556089590501 | WD-25/04E/35-1203 | 400BCPX | 08-19-86** | 62.00 | 405 | 6.50 | 12.0 | .30 | -- |
|  |  | 400BCPX | 08-19-86** | 62.00 | 405 | 6.50 | 12.0 | .20 | -- |
| 443557090055901 | WD-25/03E/35-1164 | 400BCPX | 06-28-86 | 80.00 | 538 | 7.20 | 11.0 | 70 | -- |
| 443558090153201 | WD-25/02E/33-1118 | 372EKMD | 06-27-86 | 156 | 447 | 7.40 | 16.5 | 1.2 | -- |
| 443611090044201 | WD-25/04E/31-1200 | 400BCPX | 08-19-86 | 68.00 | 445 | 6.80 | 9.5 | .30 | -- |
| 443633089504501 | WD-25/05E/36-1230 | 400BCPX | 08-19-86 | 103 | 775 | 6.80 | 13.0 | .30 | -- |
| 443641090031901 | WD-25/04E/32-1202 | 400BCPX | 08-19-86 | 360 | 340 | 6.60 | 10.0 | 1.0 | -- |
| 443732090052401 | WD-25/03E/25-1146 | 400BCPX | 06-28-86 | 71.00 | 548 | 6.60 | 11.0 | 2.0 | -- |
| 443734090103601 | WD-25/03E/29-1151 | 400BCPX | 06-30-86 | 90.00 | 525 | 7.30 | 15.0 | 2.0 | -- |
| 443738090152101 | WD-25/02E/27-1112 | 400BCPX | 06-27-86 | 80.00 | 265 | 6.10 | 10.0 | 1.0 | -- |
| 443801090073301 | WD-25/03E/22-1248 | 110QRNR | 06-18-86 | 19.00 | 225 | 7.10 | 11.0 | -- | 390 |
| 443802090073101 | WD-25/03E/22-1247 | 110QRNR | 06-18-86 | 15.50 | 370 | 7.00 | 9.0 | -- | 22 |
| 443803090073101 | WD-25/03E/22-1246 | 110QRNR | 06-18-86 | 11.00 | 680 | 7.20 | 11.0 | -- | 210 |
| 443803090073401 | WD-25/03E/22-1245 | 110QRNR | 06-18-86 | 16.60 | 290 | 6.70 | 9.5 | -- | 36 |
| 443806090073301 | WD-25/03E/22-1256 | 110QRNR | 06-18-86 | 20.00 | 225 | 7.10 | 11.0 | -- | 22 |
| 443827090044801 | WD-25/03E/13-1133 | 400BCPX | 06-28-86 | 60.00 | 503 | 7.40 | 16.0 | 1.0 | -- |
| 443828089584401 | WD-25/04E/24-1193 | 400BCPX | 08-18-86 | 104 | 265 | 7.50 | 11.0 | .70 | -- |
| 443832089580801 | WD-25/04E/13-1187 | 400BCPX | 08-18-86 | 103 | 285 | 6.60 | 13.0 | 1.9 | -- |
| 443842090180101 | WD-25/02E/18-1100 | 372EKMD | 06-27-86 | 83.00 | 390 | 7.30 | 17.5 | .70 | -- |
| 443903089542501 | WD-25/05E/16-1215 | 400BCPX | 08-19-86 | 88.00 | 375 | 6.30 | 9.5 | .20 | -- |
| 443922089534201 | WD-25/05E/15-1213 | 400BCPX | 08-19-86 | 158 | 310 | 7.20 | 9.5 | .60 | -- |
| 443928089515801 | WD-25/05E/11-1209 | 400BCPX | 08-19-86 | 110 | 470 | 5.60 | 12.5 | .70 | -- |
| 443954089504501 | WD-25/05E/12-1210 | 400BCPX | 08-19-86 | 100 | 335 | 6.10 | 12.5 | .30 | -- |
| 444025090072701 | WD-25/03E/03-1127 | 400BCPX | 06-28-86 | 100 | 185 | 6.90 | 11.0 | 1.0 | -- |
| 444035090012701 | WD-25/04E/03-1171 | 400BCPX | 08-18-86 | 126 | 410 | 6.70 | 14.5 | .40 | -- |
| 444037090121202 | WD-25/02E/01-1082 | 400BCPX | 06-27-86 | 123 | 375 | 7.40 | 12.0 | 7.8 | -- |
| 444041090142201 | WD-25/02E/03-1087 | 372EKMD | 06-27-86 | 75.00 | 85 | 5.60 | 15.0 | 1.0 | -- |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | DATE OF SAMPLE | HARD-NESS (MG/L AS CACO3) (00900) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) (00902) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | WOOD | | | | | | |
| 443039090035201 | 08-26-86 | 58 | 5 | 12 | 6.9 | -- | -- | 53 | 51 | -- | 2.8 |
| 443046089510101 | 08-20-86 | 200 | 18 | 50 | 19 | -- | -- | 185 | 113 | -- | 26 |
| 443051090081501 | 08-21-86 | 83 | 0 | 22 | 6.9 | -- | -- | 102 | 62 | -- | .90 |
| 443057090131101 | 06-28-86 | 100 | 0 | 27 | 8.3 | -- | -- | 102 | 7.9 | -- | 3.2 |
| 443100089590501 | 08-20-86 | 190 | 93 | 42 | 21 | -- | -- | 99 | 152 | -- | 70 |
| 443108090010401 | 08-21-86 | 95 | 5 | 20 | 11 | -- | -- | 90 | 69 | -- | 5.7 |
| 443110090104401 | 06-28-86 | 140 | 0 | 41 | 10 | -- | -- | 158 | 9.7 | -- | 8.8 |
| 443120089553301 | 08-21-86 | 130 | 0 | 31 | 12 | -- | -- | 133 | 51 | -- | 66 |
| 443145089574701 | 08-21-86 | 230 | 16 | 54 | 24 | -- | -- | 218 | 134 | -- | 31 |
| 443148090041701 | 08-21-86 | 39 | 0 | 6.6 | 5.5 | -- | -- | 44 | 43 | -- | 4.3 |
| 443148090162201 | 06-28-86 | 46 | 0 | 11 | 4.5 | -- | -- | 47 | 9.1 | -- | 3.7 |
| 443152090050701 | 08-21-86 | 83 | 10 | 15 | 11 | -- | -- | 73 | 71 | -- | 1.4 |
| 443156090035901 | 08-21-86 | 200 | 36 | 33 | 29 | -- | -- | 166 | 102 | -- | 16 |
| 443201090014601 | 06-17-86 | 1300 | 1300 | 240 | 180 | 300 | 27 | 57 | 175 | 1500 | 370 |
| 443202090014201 | 06-17-86 | 160 | 150 | 31 | 19 | 26 | .90 | 10 | 97 | 19 | 7.5 |
| 443203090014401 | 06-17-86 | 52 | 46 | 12 | 5.4 | 18 | 1.2 | 6.0 | 18 | 64 | 9.0 |
| 443203090132801 | 08-22-86 | 18 | 0 | 4.1 | 1.9 | -- | -- | 19 | 46 | -- | .60 |
| 443222089514501 | 08-20-86 | 83 | 0 | 21 | 7.5 | -- | -- | 90 | 87 | -- | 3.3 |
| 443227089545101 | 06-17-86 | 110 | 9 | 32 | 7.4 | 6.1 | 4.5 | 102 | 62 | 28 | 9.1 |
| 443227089545501 | 06-16-86 | 150 | 140 | 27 | 20 | 16 | 2.1 | 6.0 | 73 | 170 | 9.9 |
| 443229089545501 | 06-17-86 | 45 | 39 | 8.6 | 5.6 | 5.4 | 2.0 | 6.0 | 146 | 46 | 3.5 |
| 443238089590601 | 08-20-86 | 170 | 84 | 33 | 21 | -- | -- | 85 | 66 | -- | 45 |
| 443240090082101 | 06-28-86 | 100 | 0 | 26 | 8.7 | -- | -- | 105 | 16 | -- | .50 |
| 443246090142201 | 06-28-86 | 94 | 79 | 21 | 10 | -- | -- | 15 | .4 | -- | .40 |
| 443320090070201 | 06-18-86 | 150 | 130 | 27 | 19 | 88 | 15 | 15 | 231 | 55 | 220 |
| 443320090070601 | 06-18-86 | 180 | 160 | 34 | 23 | 36 | 2.5 | 15 | 58 | 11 | 160 |
| 443323090163501 | 06-28-86 | 34 | 32 | 8.0 | 3.5 | -- | -- | 2.0 | 1.2 | -- | .30 |
| 443331090012801 | 08-20-86 | 120 | 12 | 31 | 11 | -- | -- | 111 | 54 | -- | 43 |
| 443332090105001 | 06-28-86 | 95 | 0 | 20 | 11 | -- | -- | 105 | 16 | -- | 2.5 |
| 443355090040601 | 08-20-86 | 140 | 31 | 31 | 14 | -- | -- | 104 | 64 | -- | 26 |
| 443404089590501 | 08-20-86 | 98 | 33 | 18 | 13 | -- | -- | 66 | 51 | -- | 22 |
| 443411090051201 | 06-28-86** | 170 | 25 | 39 | 18 | -- | -- | 147 | 18 | -- | 17 |
| | 06-28-86** | 170 | 27 | 40 | 18 | -- | -- | 147 | 18 | -- | 19 |
| 443413090182401 | 06-28-86 | 79 | 0 | 19 | 7.7 | -- | -- | 85 | 16 | -- | 3.3 |
| 443503090132601 | 06-28-86 | 20 | 12 | 4.4 | 2.2 | -- | -- | 8.0 | 7.8 | -- | 1.8 |
| 443530090175501 | 06-28-86 | 120 | 5 | 29 | 11 | -- | -- | 113 | 11 | -- | 4.3 |
| 443540090093401 | 06-28-86 | 39 | 19 | 8.4 | 4.4 | -- | -- | 20 | 3.1 | -- | 10 |
| 443555090112701 | 06-28-86 | 210 | 17 | 60 | 14 | -- | -- | 191 | 37 | -- | 5.9 |
| 443556089555701 | 08-19-86 | 110 | 13 | 22 | 13 | -- | -- | 96 | 74 | -- | 13 |
| 443556089590501 | 08-19-86** | 210 | 72 | 43 | 25 | -- | -- | 139 | 85 | -- | 47 |
| | 08-19-86** | 200 | 58 | 39 | 24 | -- | -- | 138 | 85 | -- | 46 |
| 443557090055901 | 06-28-86 | 270 | 0 | 69 | 23 | -- | -- | 279 | 34 | -- | 2.3 |
| 443558090153201 | 06-27-86 | 180 | 60 | 47 | 15 | -- | -- | 119 | 9.2 | -- | 40 |
| 443611090044201 | 08-19-86 | 220 | 4 | 58 | 18 | -- | -- | 215 | 66 | -- | 7.8 |
| 443633089504501 | 08-19-86 | 390 | 130 | 120 | 21 | -- | -- | 261 | 80 | -- | 37 |
| 443641090031901 | 08-19-86 | 140 | 35 | 31 | 16 | -- | -- | 108 | 53 | -- | 26 |
| 443732090052401 | 06-28-86 | 200 | 150 | 46 | 20 | -- | -- | 47 | 23 | -- | 120 |
| 443734090103601 | 06-30-86 | 240 | 0 | 61 | 22 | -- | -- | 268 | 26 | -- | 2.4 |
| 443738090152101 | 06-27-86 | 73 | 49 | 17 | 7.4 | -- | -- | 24 | 37 | -- | 25 |
| 443801090073301 | 06-18-86 | 92 | 0 | 23 | 8.5 | 7.3 | 2.0 | 107 | 16 | 5.4 | 4.2 |
| 443802090073101 | 06-18-86 | 170 | 9 | 42 | 16 | 7.2 | 2.6 | 162 | 31 | 8.5 | 13 |
| 443803090073101 | 06-18-86 | 180 | 0 | 45 | 16 | 8.5 | 3.3 | 204 | 25 | 3.4 | 1.4 |
| 443803090073401 | 06-18-86 | 140 | 0 | 36 | 12 | 6.4 | 1.3 | 151 | 58 | 11 | 1.1 |
| 443806090073301 | 06-18-86 | 92 | 0 | 23 | 8.5 | 7.3 | 2.0 | 105 | 16 | 5.6 | 4.2 |
| 443827090044801 | 06-28-86 | 230 | 34 | 60 | 20 | -- | -- | 198 | 15 | -- | 11 |
| 443828089584401 | 08-18-86 | 110 | 18 | 35 | 6.2 | -- | -- | 95 | 5.8 | -- | 10 |
| 443832089580801 | 08-18-86 | 110 | 24 | 30 | 8.8 | -- | -- | 87 | 42 | -- | 17 |
| 443842090180101 | 06-27-86 | 240 | 8 | 60 | 21 | -- | -- | 229 | 22 | -- | 4.4 |
| 443903089542501 | 08-19-86 | 170 | 74 | 42 | 16 | -- | -- | 97 | 94 | -- | 27 |
| 443922089534201 | 08-19-86 | 130 | 45 | 34 | 12 | -- | -- | 89 | 11 | -- | 22 |
| 443928089515801 | 08-19-86 | 140 | 0 | 35 | 12 | -- | -- | 351 | 1710 | -- | 41 |
| 443954089504501 | 08-19-86 | 140 | 53 | 35 | 12 | -- | -- | 84 | 129 | -- | 23 |
| 444025090072701 | 06-28-86 | 71 | 21 | 19 | 5.6 | -- | -- | 50 | 12 | -- | 6.7 |
| 444035090012701 | 08-18-86 | 160 | 62 | 33 | 19 | -- | -- | 99 | 38 | -- | 52 |
| 444037090121202 | 06-27-86 | 150 | 0 | 38 | 14 | -- | -- | 171 | 13 | -- | 1.1 |
| 444041090142201 | 06-27-86 | 24 | 0 | 5.8 | 2.4 | -- | -- | 27 | 131 | -- | 1.1 |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

### WOOD

| STATION NUMBER | DATE OF SAMPLE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) | NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613) | NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | IRON, DIS-SOLVED (UG/L AS FE) (01046) | MANGANESE, DIS-SOLVED (UG/L AS MN) (01056) | CARBON, *ORGANIC* DIS-SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|
| 443039090035201 | 08-26-86 | -- | -- | 1.4 | 32 | -- | -- |
| 443046089510101 | 08-20-86 | -- | -- | <.10 | 4200 | -- | -- |
| 443051090081501 | 08-21-86 | -- | -- | <.10 | 60 | -- | -- |
| 443057090131101 | 06-28-86 | -- | -- | <.10 | 50 | -- | -- |
| 443100089590501 | 08-20-86 | -- | -- | <.10 | 13000 | -- | -- |
| 443108090010401 | 08-21-86 | -- | -- | 2.4 | 180 | -- | -- |
| 443110090104401 | 06-28-86 | -- | -- | <.10 | 45 | -- | -- |
| 443120089553301 | 08-21-86 | -- | -- | <.10 | 2100 | -- | -- |
| 443145089574701 | 08-21-86 | -- | -- | <.10 | 820 | -- | -- |
| 443148090041701 | 08-21-86 | -- | -- | .11 | 60 | -- | -- |
| 443148090162201 | 06-28-86 | -- | -- | .26 | 1100 | -- | -- |
| 443152090050701 | 08-21-86 | -- | -- | .49 | 460 | -- | -- |
| 443156090055901 | 08-21-86 | -- | -- | 3.5 | 7 | -- | -- |
| 443201090014601 | 06-17-86 | 2920 | <.010 | <.10 | 5100 | 4100 | 48 |
| 443202090014201 | 06-17-86 | 293 | <.010 | <.10 | 6400 | 48 | 10 |
| 443203090014401 | 06-17-86 | 145 | <.010 | .13 | 460 | 35 | 44 |
| 443203090132801 | 08-22-86 | -- | -- | .19 | 81 | -- | -- |
| 443222089514501 | 08-20-86 | -- | -- | <.10 | 5500 | -- | -- |
| 443227089545101 | 06-17-86 | 161 | <.010 | <.10 | 5800 | 290 | 30 |
| 443227089545501 | 06-16-86 | 287 | .010 | .14 | 83 | 330 | 10 |
| 443229089545501 | 06-17-86 | 92 | <.010 | .31 | 330 | 140 | 4.5 |
| 443238089590601 | 08-20-86 | -- | -- | 7.4 | 21 | -- | -- |
| 443240090082101 | 06-28-86 | -- | -- | <.10 | 1100 | -- | -- |
| 443246090142201 | 06-28-86 | -- | -- | <.10 | 120 | -- | -- |
| 443320090070201 | 06-18-86 | 506 | <.010 | <.10 | 5800 | 800 | -- |
| 443320090070601 | 06-18-86 | 385 | <.010 | <.10 | 4700 | 1500 | -- |
| 443323090163501 | 06-28-86 | -- | -- | .17 | 7 | -- | -- |
| 443331090012801 | 08-20-86 | -- | -- | <.10 | 120 | -- | -- |
| 443332090105001 | 06-28-86 | -- | -- | <.10 | 190 | -- | -- |
| 443355090040601 | 08-20-86 | -- | -- | <.10 | 4300 | -- | -- |
| 443404089590501 | 08-20-86 | -- | -- | 3.7 | 70 | -- | -- |
| 443411090051201 | 06-28-86** | -- | -- | <.10 | 3300 | -- | -- |
|  | 06-28-86** | -- | -- | <.10 | 3300 | -- | -- |
| 443413090182401 | 06-28-86 | -- | -- | .52 | 7 | -- | -- |
| 443503090132601 | 06-28-86 | -- | -- | 6.0 | 14 | -- | -- |
| 443530090175501 | 06-28-86 | -- | -- | 3.0 | 7 | -- | -- |
| 443540090093401 | 06-28-86 | -- | -- | 4.5 | 6 | -- | -- |
| 443555090112701 | 06-28-86 | -- | -- | 5.6 | 39 | -- | -- |
| 443556089555701 | 08-19-86 | -- | -- | .84 | 47 | -- | -- |
| 443556089590501 | 08-19-86** | -- | -- | 1.5 | 6 | -- | -- |
|  | 08-19-86** | -- | -- | 1.5 | 8 | -- | -- |
| 443557090055901 | 06-28-86 | -- | -- | <.10 | 6000 | -- | -- |
| 443558090153201 | 06-27-86 | -- | -- | 3.3 | 13 | -- | -- |
| 443611090044201 | 08-19-86 | -- | -- | 3.3 | 13 | -- | -- |
| 443633089504501 | 08-19-86 | -- | -- | 1.7 | 21 | -- | -- |
| 443641090031901 | 08-19-86 | -- | -- | 4.5 | 23 | -- | -- |
| 443732090052401 | 06-28-86 | -- | -- | 1.6 | 20 | -- | -- |
| 443734090103601 | 06-30-86 | -- | -- | <.10 | 56 | -- | -- |
| 443738090152101 | 06-27-86 | -- | -- | 8.1 | 19 | -- | -- |
| 443801090073301 | 06-18-86 | 133 | <.010 | <.10 | 150 | 1000 | -- |
| 443802090073101 | 06-18-86 | 222 | <.010 | <.10 | 28 | 990 | 110 |
| 443803090073101 | 06-18-86 | 215 | <.010 | <.10 | 130 | 1000 | -- |
| 443803090073401 | 06-18-86 | 171 | <.010 | <.10 | 45 | 290 | -- |
| 443806090073301 | 06-18-86 | 136 | <.010 | <.10 | 100 | 1000 | -- |
| 443827090044801 | 06-28-86 | -- | -- | 3.3 | 6 | -- | -- |
| 443828089584401 | 08-18-86 | -- | -- | 5.0 | 14 | -- | -- |
| 443832089580801 | 08-18-86 | -- | -- | 3.0 | 96 | -- | -- |
| 443842090180101 | 06-27-86 | -- | -- | 2.9 | 10 | -- | -- |
| 443903089542501 | 08-19-86 | -- | -- | 12 | 21 | -- | -- |
| 443922089534201 | 08-19-86 | -- | -- | 5.5 | 15 | -- | -- |
| 443928089515801 | 08-19-86 | -- | -- | 17 | 23 | -- | -- |
| 443954089504501 | 08-19-86 | -- | -- | 6.8 | 11 | -- | -- |
| 444025090072701 | 06-28-86 | -- | -- | 3.2 | 43 | -- | -- |
| 444035090012701 | 08-18-86 | -- | -- | 2.8 | 14 | -- | -- |
| 444037090121202 | 06-27-86 | -- | -- | <.10 | 1100 | -- | -- |
| 444041090142201 | 06-27-86 | -- | -- | 1.7 | 4 | -- | -- |

**SAMPLES WITH THE SAME DATES ARE REPLICATES.

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# ACID DEPOSITION RECORDS

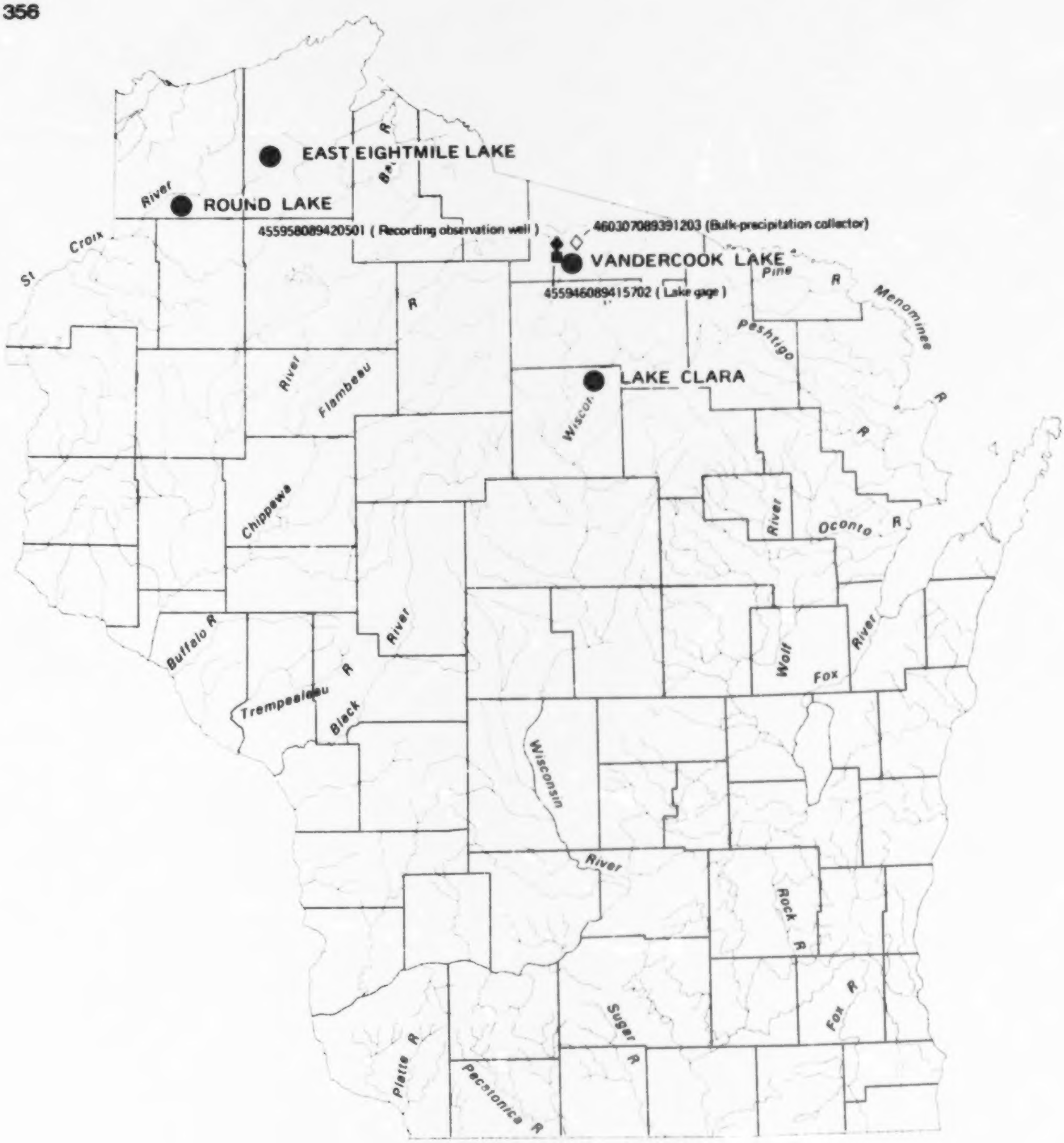

Figure 7. Location of acid deposition sites in Wisconsin.

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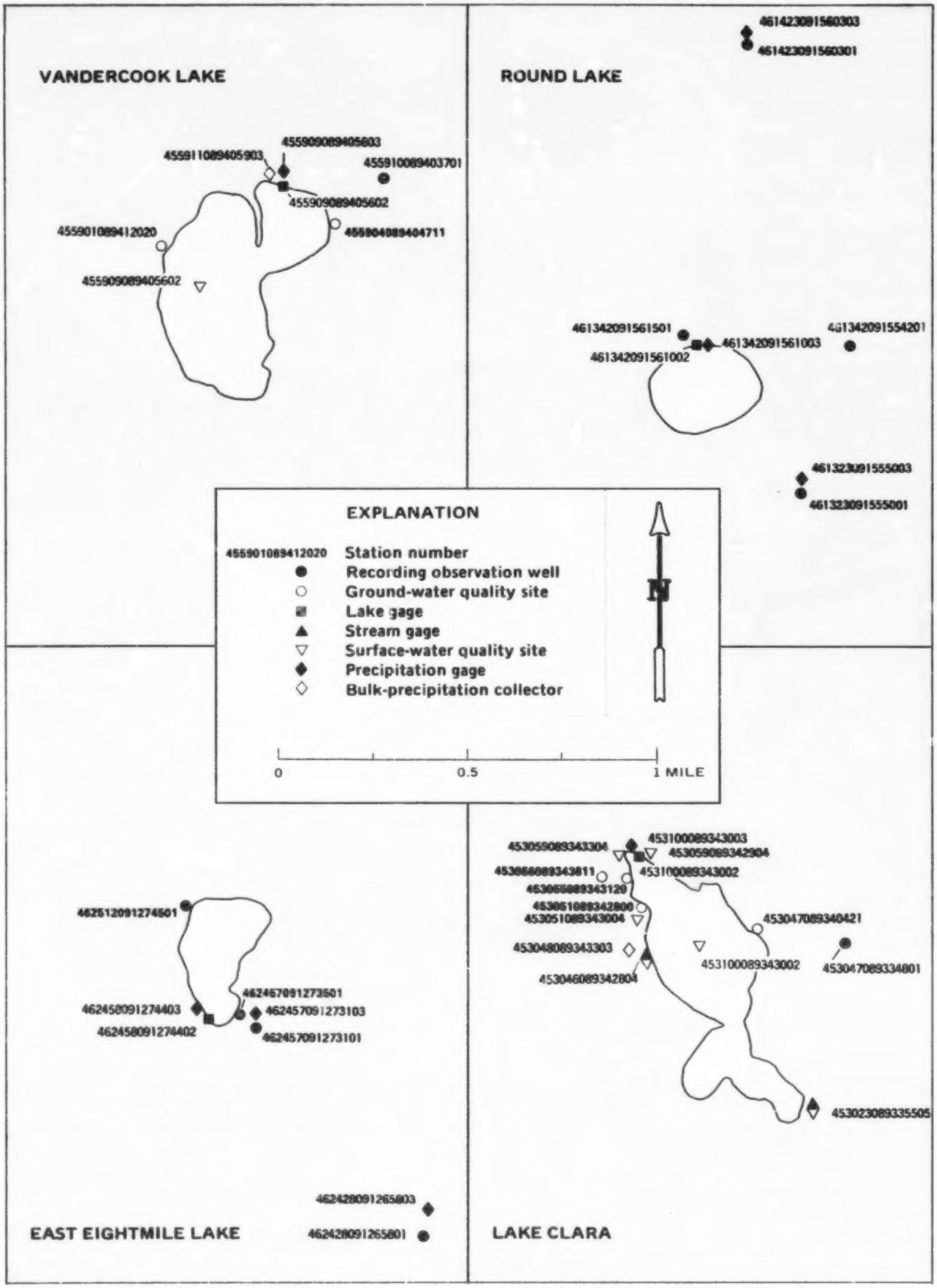

Figure 8. Location of data-collection sites at acid deposition sites in Wisconsin.

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Streamflow, lake stages, precipitation quantity, ground-water levels, and water quality for acid deposition investigations in northern Wisconsin.

## WATER-DISCHARGE RECORDS

### 453046089342804 LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI

LOCATION.--Lat 45°30'46", long 89°34'28", in NE 1/4 SW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, on west side of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.03 $mi^2$.

PERIOD OF RECORD.--September 1981 to current year.

REVISED RECORD.--WDR WI-85-1. 1984.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Tributary is intermittent. Discharge data need to be divided by 100 to obtain correct values.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 0.76 $ft^3/s$, Oct. 4, 1985; minimum daily discharge, 0 $ft^3/s$, on many days during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 0.76 $ft^3/s$, Oct. 4; minimum daily discharge, 0 $ft^3/s$, on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.0 | 17 | .00 | .00 | .00 | .00 | 8.0 | 2.0 | .00 | .00 | .30 | .00 |
| 2 | 1.0 | 15 | .00 | .00 | .00 | .00 | 2.0 | .00 | .00 | .00 | .00 | .00 |
| 3 | .00 | 3.5 | .00 | .00 | .00 | .00 | .50 | .00 | .00 | .00 | .00 | .04 |
| 4 | 76 | 2.0 | .00 | .00 | .00 | .00 | 1.0 | .00 | .00 | 1.7 | .00 | .00 |
| 5 | 8.8 | 1.7 | .00 | .00 | .00 | .00 | 2.0 | .00 | .00 | .50 | .00 | .00 |
| 6 | .00 | 2.0 | .00 | .00 | .00 | .00 | 2.0 | .00 | .00 | 1.2 | .00 | .00 |
| 7 | .67 | 1.0 | .00 | .00 | .00 | .00 | 1.0 | .00 | .00 | .00 | .00 | .00 |
| 8 | .67 | .00 | .00 | .00 | .00 | .00 | 1.0 | .00 | .00 | .00 | .00 | .00 |
| 9 | 1.3 | .00 | .00 | .00 | .00 | .00 | 1.0 | .00 | .00 | .00 | .00 | .50 |
| 10 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .00 | .00 | .00 | .00 | .80 |
| 11 | .00 | .00 | .00 | .00 | .00 | .00 | .20 | .00 | .00 | 1.4 | .00 | .00 |
| 12 | 1.9 | .00 | .00 | .00 | .00 | .00 | .20 | .00 | .00 | .10 | .00 | .00 |
| 13 | 1.0 | .00 | .00 | .00 | .00 | .00 | .20 | .00 | .00 | .00 | .00 | .00 |
| 14 | .50 | .00 | .00 | .00 | .00 | .00 | .80 | .00 | .00 | .00 | .00 | .00 |
| 15 | .00 | .00 | .00 | .00 | .00 | .00 | 2.0 | .00 | .00 | 1.0 | .00 | .10 |
| 16 | .00 | .00 | .00 | .00 | .00 | .00 | .60 | .00 | .00 | 1.6 | .03 | .00 |
| 17 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| 18 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 8.0 | .00 | .00 |
| 19 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 3.4 | 6.0 | .00 | .00 |
| 20 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 1.0 | .00 | .00 |
| 21 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .30 | .00 | .00 | .10 |
| 22 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .90 | .00 | .00 | .70 |
| 23 | .50 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 2.3 | .00 | .00 | .00 |
| 24 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 1.8 | .20 | .00 | .00 |
| 25 | .00 | .00 | .00 | .00 | .00 | .00 | .10 | .10 | .00 | .00 | .00 | .10 |
| 26 | .00 | .00 | .00 | .00 | .00 | 1.0 | 12 | .00 | .70 | .00 | .00 | 24 |
| 27 | .00 | .00 | .00 | .00 | .00 | 1.0 | 4.0 | .00 | 2.5 | .00 | .00 | 11 |
| 28 | .00 | .00 | .00 | .00 | .00 | 8.0 | 1.0 | .00 | .20 | .00 | .00 | 1.0 |
| 29 | .00 | .00 | .00 | .00 | --- | 12 | 1.5 | .00 | .00 | .00 | .00 | .00 |
| 30 | .00 | .00 | .00 | .00 | --- | 8.0 | 3.6 | .00 | .00 | .00 | .00 | .00 |
| 31 | .00 | --- | .00 | .00 | --- | 12 | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 95.34 | 42.20 | .00 | .00 | .00 | 42.00 | 45.20 | 2.10 | 12.10 | 22.70 | .33 | 38.34 |
| MEAN | 3.08 | 1.41 | .000 | .000 | .000 | 1.35 | 1.51 | .068 | .40 | .73 | .011 | 1.28 |
| MAX | 76 | 17 | .00 | .00 | .00 | 12 | 12 | 2.0 | 3.4 | 8.0 | .30 | 24 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 |

CAL YR 1985 TOTAL 313.58 MEAN .86 MAX 76 MIN .00
WTR YR 1986 TOTAL 300.31 MEAN .82 MAX 76 MIN .00

NOTE.--DIVIDE VALUES IN TABLE BY 100 TO OBTAIN CORRECT VALUES.

## 453023089335505 LAKE CLARA OUTLET NEAR TOMAHAWK, WI

LOCATION.--Lat 45°30'23", long 89°33'55", in SE 1/4 NW 1/4 NW 1/4 sec.24, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, on southeast side of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.48 $mi^2$. Area of lake, 0.13 $mi^2$.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Outlet is intermittent.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2.7 $ft^3/s$, Apr. 24, 1985 and Apr. 21, 1986; minimum daily discharge, 0 $ft^3/s$, on many days during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2.7 $ft^3/s$, Apr. 21; minimum daily discharge, 0 $ft^3/s$, on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.3 | .01 | .02 | .02 | .04 | .08 | .11 | .34 | .18 | .32 | .00 | .00 |
| 2 | 1.2 | .27 | .02 | .02 | .04 | .08 | .11 | .01 | .00 | .33 | .00 | .00 |
| 3 | 1.1 | .54 | .02 | .02 | .04 | .08 | .11 | .00 | .00 | .35 | .00 | .00 |
| 4 | 1.5 | .76 | .02 | .02 | .04 | .08 | .11 | .00 | .00 | .43 | .00 | .00 |
| 5 | 2.2 | .01 | .02 | .02 | .04 | .08 | .11 | .00 | .00 | .47 | .36 | .01 |
| 6 | 2.1 | .01 | .02 | .02 | .04 | .09 | .11 | .00 | .00 | .48 | .15 | .00 |
| 7 | 2.0 | .01 | .02 | .02 | .04 | .09 | .11 | .00 | .00 | .38 | .33 | .00 |
| 8 | 2.1 | .01 | .02 | .02 | .04 | .09 | .11 | 1.2 | .00 | .15 | .55 | .02 |
| 9 | 2.0 | .01 | .02 | .02 | .04 | .09 | .11 | 1.9 | .00 | .05 | .23 | .07 |
| 10 | 1.9 | .01 | .02 | .03 | .04 | .09 | .11 | .46 | .00 | .07 | .04 | .27 |
| 11 | 1.8 | .01 | .02 | .03 | .05 | .10 | 1.3 | 1.0 | .00 | .04 | .00 | .43 |
| 12 | 1.7 | .01 | .02 | .03 | .05 | .10 | 2.0 | .12 | .00 | .15 | .00 | .39 |
| 13 | 1.7 | .01 | .02 | .03 | .05 | .10 | 1.7 | .00 | .00 | .05 | .00 | .35 |
| 14 | 1.5 | .01 | .02 | .03 | .05 | .10 | 1.5 | .00 | .04 | .00 | .00 | .29 |
| 15 | 1.1 | .01 | .02 | .03 | .05 | .10 | 1.4 | .00 | .00 | .01 | .00 | .49 |
| 16 | .15 | .01 | .02 | .03 | .05 | .10 | 2.2 | .00 | .03 | .04 | .00 | .45 |
| 17 | .25 | .01 | .02 | .03 | .05 | .10 | 2.0 | .00 | .00 | .02 | .00 | .27 |
| 18 | .01 | .01 | .02 | .03 | .05 | .10 | 1.3 | .84 | .02 | .00 | .00 | .24 |
| 19 | .00 | .01 | .02 | .03 | .05 | .10 | .02 | .14 | .39 | .14 | .01 | .18 |
| 20 | .00 | .01 | .02 | .03 | .05 | .11 | 1.7 | .63 | .00 | .49 | .11 | .18 |
| 21 | .00 | .01 | .02 | .03 | .06 | .11 | 2.7 | .01 | .00 | .30 | .03 | .19 |
| 22 | .01 | .01 | .02 | .03 | .06 | .11 | 1.7 | .00 | .25 | .66 | .01 | .27 |
| 23 | .01 | .01 | .02 | .03 | .06 | .11 | 2.6 | .00 | .84 | .03 | .10 | .25 |
| 24 | .00 | .01 | .02 | .04 | .06 | .11 | .16 | .00 | 1.1 | .00 | .01 | .23 |
| 25 | .00 | .01 | .02 | .04 | .07 | .11 | .00 | .00 | .75 | .00 | .00 | .21 |
| 26 | .36 | .01 | .02 | .04 | .07 | .11 | 1.4 | .36 | .91 | .00 | .00 | .28 |
| 27 | 1.1 | .01 | .02 | .04 | .07 | .11 | 2.6 | .00 | 1.1 | .00 | .00 | 1.1 |
| 28 | 1.4 | .01 | .02 | .04 | .08 | .11 | 2.1 | .00 | .94 | .50 | .00 | .75 |
| 29 | .32 | .01 | .02 | .04 | --- | .11 | 2.1 | .00 | .48 | .15 | .00 | .05 |
| 30 | .00 | .01 | .02 | .04 | --- | .11 | .34 | .00 | .39 | .00 | .00 | .01 |
| 31 | .17 | --- | .02 | .04 | --- | .11 | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 28.98 | 1.84 | .62 | .92 | 1.43 | 3.07 | 31.92 | 7.01 | 7.42 | 5.61 | 1.93 | 6.98 |
| MEAN | .93 | .061 | .020 | .030 | .051 | .099 | 1.06 | .23 | .25 | .18 | .062 | .23 |
| MAX | 2.2 | .76 | .02 | .04 | .08 | .11 | 2.7 | 1.9 | 1.1 | .66 | .55 | 1.1 |
| MIN | .00 | .01 | .02 | .02 | .04 | .08 | .00 | .00 | .00 | .00 | .00 | .00 |

CAL YR 1985 TOTAL 76.15 MEAN .21 MAX 2.7 MIN .00
WTR YR 1986 TOTAL 97.73 MEAN .27 MAX 2.7 MIN .00

## STAGE RECORDS

### 453100089343002 LAKE CLARA NEAR TOMAHAWK, WI

LOCATION.--Lat 45°31'00", long 89°34'30", in NE 1/4 NW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, at north end of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.48 mi$^2$. Area of lake, 0.13 mi$^2$.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake has intermittent surface inlet and outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 16.90 ft, June 16 and 17, 1981; minimum observed gage height, 15.50 ft, Aug. 16, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 16.76 ft, Apr. 8-10; minimum observed gage height, 15.89 ft, Sept. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.13 | 16.19 | 16.42 | 16.44 | 16.38 | 16.34 | 16.57 | 16.40 | 16.13 | 16.05 | 16.12 | 15.92 |
| 2 | 16.12 | 16.27 | 16.44 | 16.44 | 16.37 | 15.34 | 16.61 | 16.39 | 16.12 | 16.03 | 16.16 | 15.92 |
| 3 | 16.11 | 16.27 | 16.42 | 16.44 | 16.38 | 16.33 | 16.64 | 16.39 | 16.10 | 16.02 | 16.15 | 15.90 |
| 4 | 16.18 | 16.27 | 16.42 | 16.42 | 16.38 | 16.33 | 16.67 | 16.39 | 16.09 | 16.05 | 16.13 | 15.96 |
| 5 | 16.34 | 16.27 | 16.42 | 16.40 | 16.38 | 16.33 | 16.70 | 16.39 | 16.07 | 16.06 | 16.13 | 15.94 |
| 6 | 16.34 | 16.26 | 16.43 | 16.39 | 16.38 | 16.33 | 16.74 | 16.38 | 16.07 | 16.06 | 16.11 | 15.93 |
| 7 | 16.31 | 16.26 | 16.43 | 16.38 | 16.38 | 16.33 | 16.75 | 16.38 | 16.05 | 16.04 | 16.10 | 15.90 |
| 8 | 16.33 | 16.26 | 16.43 | 16.36 | 16.38 | 16.33 | 16.76 | 16.35 | 16.06 | 16.00 | 16.09 | 15.91 |
| 9 | 16.30 | 16.26 | 16.43 | 16.36 | 16.38 | 16.33 | 16.76 | 16.32 | 16.05 | 15.99 | 16.06 | 15.89 |
| 10 | 16.29 | 16.25 | 16.43 | 16.36 | 16.37 | 16.33 | 16.76 | 16.29 | 16.04 | 15.99 | 16.07 | 16.00 |
| 11 | 16.25 | 16.24 | 16.43 | 16.35 | 16.37 | 16.34 | 16.75 | 16.28 | 16.04 | 15.99 | 16.06 | 16.04 |
| 12 | 16.24 | 16.24 | 16.43 | 16.34 | 16.37 | 16.34 | 16.73 | 16.25 | 16.05 | 16.02 | 16.05 | 16.01 |
| 13 | 16.23 | 16.24 | 16.43 | 16.32 | 16.38 | 16.34 | 16.70 | 16.25 | 16.05 | 16.02 | 16.04 | 15.99 |
| 14 | 16.21 | 16.24 | 16.42 | 16.32 | 16.38 | 16.34 | 16.65 | 16.25 | 16.05 | 16.03 | 16.04 | 15.98 |
| 15 | 16.16 | 16.24 | 16.42 | 16.32 | 16.39 | 16.34 | 16.64 | 16.25 | 16.04 | 16.04 | 16.05 | 16.02 |
| 16 | 16.15 | 16.28 | 16.42 | 16.32 | 16.38 | 16.34 | 16.62 | 16.25 | 16.02 | 16.08 | 16.06 | 16.02 |
| 17 | 16.14 | 16.29 | 16.42 | 16.31 | 16.39 | 16.34 | 16.58 | 16.25 | 16.00 | 16.08 | 16.08 | 16.00 |
| 18 | 16.14 | 16.29 | 16.42 | 16.32 | 16.39 | 16.36 | 16.56 | 16.25 | 16.00 | 16.10 | 16.07 | 16.00 |
| 19 | 16.14 | 16.31 | 16.42 | 16.33 | 16.39 | 16.40 | 16.54 | 16.22 | 16.11 | 16.20 | 16.05 | 16.00 |
| 20 | 16.13 | 16.34 | 16.42 | 16.33 | 16.39 | 16.38 | 16.53 | 16.21 | 16.13 | 16.22 | 16.04 | 16.00 |
| 21 | 16.13 | 16.34 | 16.42 | 16.33 | 16.37 | 16.36 | 16.46 | 16.19 | 16.11 | 16.19 | 16.04 | 16.00 |
| 22 | 16.13 | 16.35 | 16.43 | 16.34 | 16.35 | 16.36 | 16.44 | 16.18 | 16.13 | 16.18 | 16.01 | 16.03 |
| 23 | 16.14 | 16.35 | 16.44 | 16.34 | 16.36 | 16.36 | 16.40 | 16.18 | 16.14 | 16.15 | 16.02 | 16.03 |
| 24 | 16.15 | 16.35 | 16.44 | 16.35 | 16.35 | 16.35 | 16.40 | 16.17 | 16.15 | 16.15 | 16.00 | 16.03 |
| 25 | 16.15 | 16.36 | 16.44 | 16.36 | 16.35 | 16.34 | 16.39 | 16.20 | 16.14 | 16.17 | 16.00 | 16.03 |
| 26 | 16.15 | 16.37 | 16.44 | 16.35 | 16.35 | 15.34 | 16.45 | 16.21 | 16.13 | 16.17 | 16.00 | 16.03 |
| 27 | 16.13 | 16.37 | 16.45 | 16.34 | 16.36 | 16.35 | 16.48 | 16.20 | 16.16 | 16.17 | 15.97 | 16.03 |
| 28 | 16.12 | 16.38 | 16.45 | 16.34 | 16.34 | 16.36 | 16.43 | 16.19 | 16.13 | 16.18 | 15.95 | 16.03 |
| 29 | 16.12 | 16.40 | 16.45 | 16.35 | --- | 16.38 | 16.41 | 16.19 | 16.10 | 16.14 | 15.94 | 16.03 |
| 30 | 16.11 | 16.40 | 16.45 | 16.35 | --- | 16.42 | 16.41 | 16.18 | 16.07 | 16.13 | 15.94 | 16.03 |
| 31 | 16.10 | --- | 16.45 | 16.35 | --- | 16.49 | --- | 16.16 | --- | 16.12 | 15.94 | --- |
| MEAN | 16.18 | 16.30 | 16.43 | 16.36 | 16.37 | 16.35 | 16.58 | 16.26 | 16.08 | 16.09 | 16.05 | 15.99 |
| MAX | 16.34 | 16.40 | 16.45 | 16.44 | 16.39 | 16.49 | 16.76 | 16.40 | 16.16 | 16.22 | 16.16 | 16.04 |
| MIN | 16.10 | 16.19 | 16.42 | 16.31 | 16.34 | 16.33 | 16.39 | 16.16 | 16.00 | 15.99 | 15.94 | 15.89 |

CAL YR 1985 MEAN 16.26 MAX 16.83 MIN 15.67
WTR YR 1986 MEAN 16.25 MAX 16.76 MIN 15.89

## PRECIPITATION QUANTITY

### 453100089343003 LAKE CLARA RAIN GAGE NEAR TOMAHAWK, WI

LOCATION.--Lat 45°31'00", long 89°34'30", in NE 1/4 NW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, at north end of lake, 8.2 mi east of Tomahawk.

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 6.49 in., June 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.43 in., Oct. 4.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .07 | 2.20 | | | | | --- | .00 | .00 | .00 | .82 | .00 |
| 2 | .01 | .19 | | | | | --- | .00 | .00 | .02 | .05 | .00 |
| 3 | .12 | .02 | | | | | --- | .00 | .00 | .00 | .03 | .61 |
| 4 | 2.43 | .02 | | | | | --- | .00 | .00 | .71 | .00 | .20 |
| 5 | .08 | .00 | | | | | --- | .00 | .00 | .28 | .26 | .00 |
| 6 | .00 | .17 | | | | | --- | .00 | .00 | .02 | .02 | .00 |
| 7 | .30 | .00 | | | | | --- | .00 | .16 | .00 | .21 | .00 |
| 8 | .25 | .00 | | | | | --- | .00 | .00 | .04 | .03 | .00 |
| 9 | .21 | .05 | | | | | --- | .00 | .00 | .00 | .00 | .96 |
| 10 | .01 | .02 | | | | | --- | .00 | .04 | .00 | .49 | 1.41 |
| 11 | .01 | .04 | | | | | --- | .06 | .40 | .85 | .02 | .05 |
| 12 | .26 | .00 | | | | | --- | .00 | .00 | .24 | .00 | .02 |
| 13 | .00 | .00 | | | | | --- | .12 | .01 | .11 | .00 | .01 |
| 14 | .00 | .00 | | | | | --- | .03 | .00 | .00 | .47 | .65 |
| 15 | .00 | .01 | | | | | --- | .09 | .00 | .84 | .00 | .56 |
| 16 | .01 | .00 | | | | | .01 | .13 | .00 | .01 | .40 | .01 |
| 17 | .00 | .02 | | | | | .00 | .02 | .00 | .00 | .06 | .10 |
| 18 | .00 | .56 | | | | | .06 | .00 | .00 | 1.89 | .00 | .03 |
| 19 | .00 | --- | | | | | .03 | .00 | 1.83 | .49 | .00 | .20 |
| 20 | .00 | --- | | | | | .13 | .00 | .01 | .02 | .08 | .03 |
| 21 | .01 | --- | | | | | .00 | .00 | .39 | .01 | .03 | 1.16 |
| 22 | .00 | --- | | | | | .01 | .06 | .02 | .02 | .17 | .10 |
| 23 | .06 | --- | | | | | .00 | .01 | 1.00 | .02 | .02 | .00 |
| 24 | .00 | --- | | | | | .00 | .40 | .01 | .63 | .01 | .00 |
| 25 | .01 | --- | | | | | .34 | .01 | .08 | .01 | .00 | .61 |
| 26 | .00 | --- | | | | | 1.38 | .00 | .69 | .01 | .12 | 1.92 |
| 27 | .00 | --- | | | | | .05 | .00 | .06 | .56 | .01 | .80 |
| 28 | .00 | --- | | | | | .23 | .00 | .00 | .00 | .00 | .00 |
| 29 | .00 | --- | | | | | .18 | .00 | .00 | .00 | .00 | .00 |
| 30 | .00 | --- | | | | | .81 | .00 | .00 | .00 | .00 | .01 |
| 31 | .23 | --- | | | | | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 4.07 | 3.30 | | | | | 3.23 | 0.93 | 4.70 | 6.78 | 3.30 | 9.44 |

## GROUND-WATER LEVELS

### 453047089334801 WELL LN-35/07E/13-0063

LOCATION.--Lat 45°30'47", long 89°33'48", in NW 1/4 SE 1/4 SW 1/4 sec.13, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, 0.25 mi east of Lake Clara, 8.2 mi east of Tomahawk.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 44 ft, cased to 41 ft, well screened 41-44 ft.

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 13.91 ft, Dec. 22, 1985; minimum observed water level, 11.50 ft, Apr. 4, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 13.91 ft, Dec. 22; minimum observed water level, 12.69 ft, Oct. 2.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12.71 | 13.57 | 13.86 | 13.67 | 13.44 | 13.20 | 13.01 | 13.54 | 13.73 | 13.49 | 13.32 | 13.10 |
| 2 | 12.69 | 13.52 | 13.80 | 13.67 | 13.43 | 13.22 | 12.97 | 13.47 | 13.67 | 13.48 | 13.31 | 13.09 |
| 3 | 12.73 | 13.48 | 13.67 | 13.66 | 13.41 | 13.18 | 13.00 | 13.51 | 13.71 | 13.47 | 13.29 | 13.11 |
| 4 | 12.81 | 13.46 | 13.77 | 13.66 | 13.44 | 13.16 | 13.02 | 13.68 | 13.75 | 13.52 | 13.28 | 13.12 |
| 5 | 12.79 | 13.53 | 13.79 | 13.71 | 13.41 | 13.19 | 13.08 | 13.73 | 13.71 | 13.50 | 13.28 | 13.09 |
| 6 | 12.76 | 13.63 | 13.76 | 13.65 | 13.37 | 13.18 | 13.11 | 13.68 | 13.70 | 13.44 | 13.28 | 13.06 |
| 7 | 12.78 | 13.62 | 13.81 | 13.55 | 13.40 | 13.11 | 13.13 | 13.59 | 13.75 | 13.41 | 13.28 | 13.05 |
| 8 | 12.89 | 13.57 | 13.81 | 13.61 | 13.38 | 13.14 | 13.12 | 13.56 | 13.70 | 13.42 | 13.29 | 13.05 |
| 9 | 12.80 | 13.55 | 13.76 | 13.75 | 13.36 | 13.21 | 13.11 | 13.59 | 13.65 | 13.42 | 13.27 | 13.05 |
| 10 | 12.85 | 13.55 | 13.75 | 13.66 | 13.34 | 13.20 | 13.17 | 13.62 | 13.70 | 13.41 | 13.26 | 13.11 |
| 11 | 12.90 | 13.56 | 13.77 | 13.68 | 13.34 | 13.11 | 13.22 | 13.66 | 13.73 | 13.42 | 13.22 | 13.11 |
| 12 | 13.03 | 13.69 | 13.83 | 13.68 | 13.34 | 13.08 | 13.22 | 13.66 | 13.69 | 13.43 | 13.21 | 13.05 |
| 13 | 13.01 | 13.69 | 13.80 | 13.54 | 13.35 | 13.12 | 13.20 | 13.66 | 13.63 | 13.40 | 13.22 | 13.01 |
| 14 | 12.99 | 13.67 | 13.80 | 13.60 | 13.37 | 13.13 | 13.28 | 13.68 | 13.61 | 13.35 | 13.26 | 13.00 |
| 15 | 13.06 | 13.63 | 13.81 | 13.58 | 13.34 | 13.09 | 13.31 | 13.66 | 13.63 | 13.35 | 13.25 | 13.04 |
| 16 | 13.00 | 13.82 | 13.78 | 13.60 | 13.32 | 13.04 | 13.24 | 13.67 | 13.65 | 13.37 | 13.23 | 13.02 |
| 17 | 13.07 | 13.76 | 13.77 | 13.61 | 13.34 | 13.04 | 13.26 | 13.66 | 13.56 | 13.36 | 13.19 | 13.07 |
| 18 | 13.12 | 13.73 | 13.73 | 13.58 | 13.33 | 13.10 | 13.33 | 13.67 | 13.59 | 13.35 | 13.16 | 13.08 |
| 19 | 13.09 | 13.76 | 13.72 | 13.54 | 13.29 | 13.11 | 13.44 | 13.65 | 13.62 | 13.35 | 13.16 | 13.06 |
| 20 | 13.12 | 13.70 | 13.73 | 13.53 | 13.26 | 12.93 | 13.43 | 13.66 | 13.57 | 13.34 | 13.17 | 13.05 |
| 21 | 13.21 | 13.62 | 13.77 | 13.55 | 13.22 | 12.98 | 13.39 | 13.70 | 13.58 | 13.34 | 13.15 | 13.05 |
| 22 | 13.26 | 13.77 | 13.91 | 13.48 | 13.28 | 13.07 | 13.36 | 13.71 | 13.59 | 13.35 | 13.17 | 13.10 |
| 23 | 13.33 | 13.79 | 13.85 | 13.42 | 13.27 | 13.04 | 13.42 | 13.70 | 13.57 | 13.35 | 13.21 | 13.10 |
| 24 | 13.32 | 13.72 | 13.74 | 13.52 | 13.24 | 12.98 | 13.46 | 13.69 | 13.52 | 13.40 | 13.16 | 13.09 |
| 25 | 13.26 | 13.73 | 13.71 | 13.61 | 13.25 | 13.09 | 13.45 | 13.69 | 13.52 | 13.38 | 13.18 | 13.08 |
| 26 | 13.36 | 13.85 | 13.88 | 13.51 | 13.33 | 13.04 | 13.49 | 13.69 | 13.56 | 13.35 | 13.16 | 13.07 |
| 27 | 13.33 | 13.76 | 13.79 | 13.48 | 13.25 | 12.97 | 13.49 | 13.71 | 13.55 | 13.36 | 13.13 | 13.07 |
| 28 | 13.32 | 13.78 | 13.73 | 13.52 | 13.18 | 13.04 | 13.56 | 13.71 | 13.52 | 13.36 | 13.11 | 13.07 |
| 29 | 13.41 | 13.74 | 13.74 | 13.48 | --- | 13.04 | 13.52 | 13.72 | 13.51 | 13.33 | 13.11 | 13.12 |
| 30 | 13.44 | 13.74 | 13.76 | 13.41 | --- | 13.01 | 13.52 | 13.75 | 13.49 | 13.33 | 13.11 | 13.10 |
| 31 | 13.50 | --- | 13.75 | 13.40 | --- | 13.00 | --- | 13.76 | --- | 13.33 | 13.10 | --- |
| MEAN | 13.06 | 13.67 | 13.78 | 13.58 | 13.33 | 13.09 | 13.28 | 13.66 | 13.63 | 13.39 | 13.21 | 13.07 |
| MAX | 13.50 | 13.85 | 13.91 | 13.75 | 13.44 | 13.22 | 13.56 | 13.76 | 13.75 | 13.52 | 13.32 | 13.12 |
| MIN | 12.69 | 13.46 | 13.67 | 13.40 | 13.18 | 12.93 | 12.97 | 13.47 | 13.49 | 13.33 | 13.10 | 13.00 |

CAL YR 1985 MEAN 12.68 MAX 13.91 MIN 11.91
WTR YR 1986 MEAN 13.40 MAX 13.91 MIN 12.69

## LAKE CLARA

## QUALITY OF SURFACE WATER

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

453046089342804 - LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI (LAT 45 30 46 LONG 089 34 28)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR , 1986 | | | | | | | | | | | | |
| 26... | 1103 | -- | 62 | 6.20 | -- | -- | .04 | 3.1 | .80 | 6.8 | .80 | 5.0 |
| 29... | 1140 | -- | 75 | 6.20 | -- | -- | .1 | 3.4 | .80 | 8.1 | .90 | 3.5 |
| APR | | | | | | | | | | | | |
| 01... | 1223 | -- | 49 | 6.20 | 9.0 | -- | .07 | 3.3 | .70 | 4.2 | .90 | 3.7 |

453051089343004 - LAKE CLARA TRIBUTARY NO. 2 NEAR TOMAHAWK, WI (LAT 45 30 51 LONG 089 34 30)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR , 1986 | | | | | | | | | | | | |
| 29... | 1201 | -- | 34 | 6.00 | -- | -- | .02 | 2.6 | .70 | 2.2 | .70 | 2.8 |
| APR | | | | | | | | | | | | |
| 01... | 1205 | -- | 38 | 6.00 | -- | -- | .03 | 2.5 | .60 | 3.3 | .70 | 2.5 |

453059089343304 - LAKE CLARA TRIBUTARY NO. 3 NEAR TOMAHAWK, WI (LAT 45 30 59 LONG 089 34 33)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | | | |
| 01... | 1140 | -- | 24 | 4.80 | -- | -- | .1 | 1.2 | .30 | 1.3 | .70 | <.500 |

453059089342904 - LAKE CLARA TRIBUTARY NO. 4 NEAR TOMAHAWK, WI (LAT 45 30 59 LONG 089 34 29)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR , 1986 | | | | | | | | | | | | |
| 29... | 1221 | -- | 82 | 3.90 | -- | -- | .3 | 1.9 | .60 | 3.8 | .90 | <.500 |

453023089335505 - LAKE CLARA OUTLET NEAR TOMAHAWK, WI (LAT 45 30 23 LONG 089 33 55)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR , 1986 | | | | | | | | | | | | |
| 01... | 1239 | -- | 21 | 5.40 | -- | -- | .03 | 1.3 | .30 | 1.4 | .70 | 1.7 |

453100089343002 - LAKE CLARA NEAR TOMAHAWK, WI (LAT 45 31 00 LONG 089 34 30)

| DATE | TIME | SAM-PLING DEPTH (FEET) (00003) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | OXYGEN, DIS-SOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | | |
| 17... | 1030 | 3.00 | 30 | 6.20 | 10.0 | 9.3 | .1 | 1.8 | .58 | 2.7 | .70 | 4.0 |
| DEC | | | | | | | | | | | | |
| ** 16... | 1500 | 3.00 | 33 | 6.40 | 2.0 | 10.6 | .05 | 1.9 | .60 | 2.8 | 1.0 | 1.6 |
| ** 16... | 1501 | 3.00 | 33 | 6.40 | 2.0 | 10.6 | .07 | 1.8 | .60 | 2.5 | .90 | 1.5 |
| JAN , 1986 | | | | | | | | | | | | |
| 13... | 1130 | 3.00 | 31 | 6.10 | 2.0 | 9.6 | .04 | 1.9 | .50 | 2.7 | 1.2 | 1.9 |
| 13... | 1135 | 31.0 | 34 | 5.90 | 4.5 | 2.1 | .2 | 2.1 | .60 | 2.8 | 1.3 | 4.1 |
| MAR | | | | | | | | | | | | |
| 04... | 1120 | 3.00 | 30 | 5.90 | 2.5 | 9.8 | .06 | 1.8 | .60 | 2.6 | .90 | 1.0 |
| 04... | 1130 | 31.0 | 55 | 6.40 | 5.0 | .2 | .2 | 3.0 | .70 | 2.9 | 1.0 | 5.8 |
| APR | | | | | | | | | | | | |
| 01... | 1125 | 3.00 | 29 | 5.90 | 4.0 | 9.2 | .02 | 1.7 | .50 | 2.6 | .80 | 1.7 |
| 01... | 1135 | 21.0 | 33 | 5.60 | 4.5 | 3.1 | .02 | 1.9 | .60 | 2.9 | .80 | 2.1 |
| MAY | | | | | | | | | | | | |
| 06... | 1000 | 3.00 | 32 | 6.40 | 14.5 | 11.2 | .02 | 1.8 | .50 | 2.7 | .80 | 1.7 |
| 06... | 1010 | 28.0 | 33 | 5.70 | 8.0 | 7.6 | .03 | 1.8 | .50 | 2.7 | .80 | 1.5 |
| JUN | | | | | | | | | | | | |
| 03... | 1120 | 3.00 | 32 | 6.40 | 19.5 | 9.3 | .02 | 1.8 | .60 | 2.8 | .80 | 1.7 |
| ** 03... | 1125 | 28.0 | 33 | 5.60 | 9.0 | .7 | .06 | 2.0 | .60 | 2.8 | .80 | 3.4 |
| ** 03... | 1126 | 28.0 | 34 | 5.60 | 9.0 | .7 | .05 | 2.0 | .60 | 2.9 | .80 | 3.5 |
| JUL | | | | | | | | | | | | |
| 01... | 1210 | 3.00 | 32 | 6.50 | 22.0 | 8.5 | .02 | 1.8 | .60 | 2.8 | .80 | 1.6 |
| 01... | 1220 | 27.0 | 38 | 5.90 | 9.0 | .4 | .08 | 2.2 | .60 | 2.8 | .80 | 5.0 |
| AUG | | | | | | | | | | | | |
| 04... | 1040 | 3.00 | 32 | 6.30 | 23.0 | 8.1 | .01 | -- | -- | -- | 70 | 1.6 |
| 04... | 1045 | 27.0 | 33 | 5.70 | 9.5 | .2 | .05 | 2.0 | .60 | 2.7 | .70 | 3.6 |
| SEP | | | | | | | | | | | | |
| 02... | 1010 | 3.00 | 32 | 6.40 | 20.0 | 7.5 | .03 | 1.7 | .80 | 2.8 | .80 | 1.8 |
| 02... | 1015 | 24.0 | 32 | 6.20 | 11.0 | .7 | .04 | 1.8 | .80 | 2.6 | .80 | 2.0 |

** SAMPLES WITH SAME DATES AND SAMPLING DPTHS ARE REPLICATES.

## ACID DEPOSITION RECORDS

## LAKE CLARA

## QUALITY OF SURFACE WATER

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| DATE | SULFATE DIS- SOLVED (MG/L AS SO4) (00945) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950) | SILICA, DIS- SOLVED (MG/L AS SIO2) (00955) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608) | PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671) | ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106) | IRON, DIS- SOLVED (UG/L AS FE) (01046) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 453046089342804 - LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI (LAT 45 30 46 LONG 089 34 28) | | | | | | | | | | | | |
| MAR , 1986 | | | | | | | | | | | | |
| 26... | 7.2 | 9.2 | .04 | 5.9 | 37 | .03 | .017 | .004 | 70 | 34 | 17 | 3.6 |
| 29... | 6.0 | 15 | .06 | 4.8 | 41 | .02 | .003 | .002 | 80 | 37 | 32 | 5.4 |
| APR | | | | | | | | | | | | |
| 01... | 5.9 | 7.0 | .05 | 5.5 | 30 | .01 | .008 | .005 | 80 | 24 | 10 | 5.0 |
| 453051089343004 - LAKE CLARA TRIBUTARY NO. 2 NEAR TOMAHAWK, WI (LAT 45 30 51 LONG 089 34 30) | | | | | | | | | | | | |
| MAR , 1986 | | | | | | | | | | | | |
| 29... | 6.7 | 2.5 | .05 | 5.9 | 26 | .06 | .003 | .690 | 80 | 33 | 5 | 6.0 |
| APR | | | | | | | | | | | | |
| 01... | 6.3 | 4.0 | .05 | 5.9 | 25 | .06 | .004 | .006 | 100 | 32 | 5 | 4.8 |
| 453059089343304 - LAKE CLARA TRIBUTARY NO. 3 NEAR TOMAHAWK, WI (LAT 45 30 59 LONG 089 34 33) | | | | | | | | | | | | |
| APR , 1986 | | | | | | | | | | | | |
| 01... | 4.3 | 1.0 | .04 | 4.4 | -- | .06 | .035 | .008 | 90 | 63 | 19 | 7.8 |
| 453059089342904 - LAKE CLARA TRIBUTARY NO. 4 NEAR TOMAHAWK, WI (LAT 45 30 59 LONG 089 34 29) | | | | | | | | | | | | |
| MAR , 1986 | | | | | | | | | | | | |
| 29... | 7.2 | 4.9 | .06 | 6.7 | -- | .21 | .030 | .005 | 450 | 340 | 32 | 36 |
| 453023089335505 - LAKE CLARA OUTLET NEAR TOMAHAWK, WI (LAT 45 30 23 LONG 089 33 55) | | | | | | | | | | | | |
| APR , 1986 | | | | | | | | | | | | |
| 01... | 2.1 | 2.1 | .09 | .8 | 11 | .11 | .240 | <.001 | 90 | 200 | 19 | 6.7 |
| 453100089343002 - LAKE CLARA NEAR TOMAHAWK, WI (LAT 45 31 00 LONG 089 34 30) | | | | | | | | | | | | |
| OCT , 1985 | | | | | | | | | | | | |
| 17... | .4 | 4.1 | .03 | .2 | 13 | <.01 | .018 | .001 | 40 | 30 | 8 | 4.3 |
| DEC | | | | | | | | | | | | |
| ** 16... | 4.3 | 4.3 | .04 | .08 | 16 | .02 | .046 | .002 | 30 | 18 | 11 | 4.8 |
| ** 16... | 4.3 | 4.3 | .04 | .06 | 16 | .02 | .045 | .004 | 30 | 18 | 11 | 4.3 |
| JAN , 1986 | | | | | | | | | | | | |
| 13... | 4.6 | 4.7 | .11 | .04 | 17 | .02 | .047 | .001 | 30 | 24 | 11 | 8.1 |
| 13... | 3.3 | 4.4 | .08 | .7 | 18 | .02 | .280 | .003 | 20 | 110 | 100 | 4.7 |
| MAR | | | | | | | | | | | | |
| 04... | 4.2 | 4.1 | .06 | .2 | 15 | .04 | .048 | .002 | 40 | 32 | 10 | 4.4 |
| 04... | 2.4 | 4.5 | .05 | 1.3 | 20 | .01 | .550 | .039 | 50 | 5 | 160 | 6.6 |
| APR | | | | | | | | | | | | |
| 01... | 4.1 | 4.0 | .04 | .2 | 15 | .06 | .074 | <.001 | 40 | 23 | 11 | 3.4 |
| 01... | 4.0 | 4.3 | .04 | .7 | 18 | .18 | .025 | <.001 | 50 | 87 | 41 | 3.4 |
| MAY | | | | | | | | | | | | |
| 06... | 4.0 | 4.2 | .04 | .4 | 16 | .07 | .015 | <.001 | 20 | 35 | 14 | 4.7 |
| 06... | 4.3 | 4.3 | .04 | .7 | 17 | .11 | .021 | <.001 | 30 | 36 | 28 | 3.8 |
| JUN | | | | | | | | | | | | |
| 03... | 4.1 | 4.4 | .05 | .1 | 16 | <.01 | .014 | .001 | 20 | 19 | 1 | 4.7 |
| ** 03... | 3.5 | 4.1 | .04 | .3 | 17 | .05 | .110 | .003 | 30 | 79 | 92 | 4.1 |
| ** 03... | 3.5 | 4.2 | .06 | .4 | 17 | .04 | .120 | .007 | 30 | 90 | 97 | 3.9 |
| JUL | | | | | | | | | | | | |
| 01... | 4.0 | 4.2 | .05 | .09 | 15 | <.01 | .011 | <.001 | 10 | 15 | <1 | 3.9 |
| 01... | 3.3 | 4.2 | .05 | .1 | 18 | <.01 | .120 | <.001 | 30 | 710 | 170 | 3.4 |
| AUG | | | | | | | | | | | | |
| 04... | 4.2 | 4.5 | .05 | -- | 54 | <.01 | .013 | <.001 | 20 | -- | -- | 4.6 |
| 04... | 3.6 | 4.3 | .04 | .04 | 16 | <.01 | .007 | <.001 | 30 | 92 | 150 | 3.9 |
| SEP | | | | | | | | | | | | |
| 02... | 4.0 | 4.3 | .06 | .05 | 16 | .02 | .016 | <.001 | 0 | 14 | <1 | 4.2 |
| 02... | 4.1 | 4.5 | .04 | .08 | 16 | .01 | .040 | <.001 | 10 | 53 | 8 | 4.1 |

** SAMPLES WITH SAME DATES AND SAMPLING DEPTHS ARE REPLICATES.

# ACID DEPOSITION RECORDS

## LAKE CLARA

## QUALITY OF PRECIPITATION

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

453048089343303 - LAKE CLARA BULK PRECIP COLL NR TOMAHAWK, WI (LAT 45 30 48 LONG 089 34 33)

| DATE | CUMULATIVE PRECIPITATION (IN) (00045) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | ACIDITY (MG/L AS H) (71825) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) | ALKALINITY LAB (MG/L AS CACO3) (90410) | SULFATE DISSOLVED (MG/L AS SO4) (00945) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | 5.58 | 16 | 4.60 | .4 | .36 | .08 | .60 | .07 | <1.0 | 2.0 |
| NOV 08 - DEC 03 | 4.56 | 12 | 4.60 | .2 | .13 | .01 | <.20 | .04 | <1.0 | .8 |
| DEC 03 - DEC 31 | .63 | 18 | 4.40 | -- | .10 | <.01 | .24 | .09 | -- | 1.0 |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | .92 | 35 | 4.30 | -- | .57 | .07 | .27 | .11 | -- | 2.6 |
| JAN 31 - MAR 04 | 1.06 | 25 | 4.30 | -- | .40 | .05 | .18 | .07 | -- | 1.9 |
| MAR 04 - APR 01 | 1.92 | 30 | 4.50 | -- | 1.0 | .11 | .31 | .10 | -- | 4.2 |
| APR 01 - MAY 06 | 3.19 | 20 | 4.90 | -- | .67 | .12 | .42 | .14 | -- | 3.5 |
| MAY 06 - JUN 03 | .76 | 40 | 4.30 | -- | 1.3 | .31 | .52 | .70 | -- | 5.9 |
| JUN 03 - JUL 01 | 5.58 | 10 | 5.20 | -- | .57 | .06 | .30 | .09 | -- | 1.5 |
| JUL 01 - AUG 04 | 6.58 | 11 | 4.80 | -- | .38 | .06 | .25 | .10 | -- | 1.4 |
| AUG 04 - SEP 02 | 1.82 | 27 | 4.40 | -- | .70 | .10 | .16 | .18 | -- | 4.0 |
| SEP 02 - SEP 30 | 7.66 | 12 | 4.70 | -- | .25 | .04 | .25 | .05 | -- | 1.5 |

| DATE | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | ALUMINUM, DISSOLVED (UG/L AS AL) (01106) | IRON, DISSOLVED (UG/L AS FE) (01046) | MANGANESE, DISSOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | .08 | .01 | .02 | .29 | .265 | .007 | 20 | <3 | 6 | 1.6 |
| NOV 08 - DEC 03 | .02 | .04 | <.01 | .27 | .090 | .002 | 20 | 13 | 1 | 4.1 |
| DEC 03 - DEC 31 | .17 | .02 | -- | .43 | .130 | <.010 | -- | -- | -- | -- |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | .26 | .07 | -- | .92 | .610 | <.010 | -- | -- | -- | -- |
| JAN 31 - MAR 04 | .17 | .05 | -- | .45 | .290 | .020 | -- | -- | -- | -- |
| MAR 04 - APR 01 | .20 | .15 | -- | .73 | .840 | .010 | -- | -- | -- | -- |
| APR 01 - MAY 06 | .18 | .03 | -- | .52 | .830 | <.010 | -- | -- | -- | -- |
| MAY 06 - JUN 03 | .30 | .07 | -- | 1.1 | .680 | .040 | -- | -- | -- | -- |
| JUN 03 - JUL 01 | .14 | .02 | -- | .27 | .430 | <.010 | -- | -- | -- | -- |
| JUL 01 - AUG 04 | .14 | .01 | -- | .32 | .300 | <.010 | -- | -- | -- | -- |
| AUG 04 - SEP 02 | .19 | .03 | -- | .58 | .750 | <.010 | -- | -- | -- | -- |
| SEP 02 - SEP 30 | .12 | .01 | -- | .26 | .250 | .020 | -- | -- | -- | -- |

# ACID DEPOSITION RECORDS

## LAKE CLARA

## QUALITY OF GROUND WATER

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | LOCAL IDENT- I- FIER | GEO- LOGIC UNIT | DATE OF SAMPLE | DEPTH OF WELL, TOTAL (FEET) (72008) | SPE- CIFIC CON- DUC- TANCE (US/CM) (00095) | PH (STAND- ARD UNITS) (00400) | TEMPER- ATURE (DEG C) (00010) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS- SOLVED (MG/L AS CA) (00915) |
|---|---|---|---|---|---|---|---|---|---|
| | | | LINCOLN | | | | | | |
| 453047089340421 | LN-35/07E/13-0064 | 110QRNR | 10-17-85 | 11.00 | 42 | 5.80 | 12.0 | .2 | 2.9 |
| | | 110QRNR | 12-05-85 | 11.00 | 46 | 5.80 | 8.5 | .1 | 3.4 |
| | | 110QRNR | 01-13-86 | 11.00 | 47 | 5.60 | 6.5 | .1 | 3.4 |
| | | 110QRNR | 03-04-86 | 11.00 | 45 | 5.80 | 6.0 | .2 | 3.3 |
| 453051089342800 | LN-35/07E/14-0094 | 110QRNR | 08-04-86 | 6.00 | 159 | 6.10 | 12.5 | .08 | 12 |
| 453055089343120 | LN-35/07E/14-0066 | 110QRNR | 10-17-85** | 13.00 | 127 | 5.90 | 12.0 | .2 | 9.5 |
| | | 110QRNR | 10-17-85** | 13.00 | 125 | 5.90 | 12.0 | .2 | 9.5 |
| | | 110QRNR | 12-05-85** | 13.00 | 121 | 6.00 | 8.0 | .2 | 10 |
| | | 110QRNR | 12-05-85** | 13.00 | 121 | 6.00 | 8.0 | .2 | 10 |
| | | 110QRNR | 04-01-86 | 13.00 | 121 | 5.90 | 5.5 | .08 | 9.4 |
| | | 110QRNR | 05-06-86 | 13.00 | 129 | 6.00 | 7.5 | <.01 | 9.5 |
| | | 110QRNR | 06-03-86 | 13.00 | 129 | 5.90 | 10.0 | .09 | 9.4 |
| | | 110QRNR | 07-01-86 | 13.00 | 162 | 5.90 | 11.5 | .1 | 9.2 |
| | | 110QRNR | 08-04-86 | 13.00 | 132 | 5.90 | 13.5 | .04 | 9.2 |
| | | 110QRNR | 09-02-86 | 13.00 | 129 | 5.90 | 14.5 | .07 | 8.8 |
| 453056089343611 | LN-35/07E/14-0093 | 110QRNR | 08-04-86 | 36.00 | 106 | 6.60 | 7.5 | .3 | 9.1 |

| STATION NUMBER | DATE OF SAMPLE | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925) | SODIUM, DIS- SOLVED (MG/L AS NA) (00930) | POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935) | ALKA- LINITY LAB (MG/L AS CACO3) (90410) | SULFATE DIS- SOLVED (MG/L AS SO4) (00945) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950) | SILICA, DIS- SOLVED (MG/L AS SIO2) (00955) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 453047089340421 | 10-17-85 | .78 | 2.6 | 1.2 | 15 | .9 | 4.5 | .16 | 2.2 | 26 | <.01 |
| | 12-05-85 | .86 | 2.7 | 1.1 | 11 | .7 | 3.3 | <.01 | 2.3 | 23 | <.01 |
| | 01-13-86 | .80 | 2.8 | 1.5 | 11 | .4 | 3.4 | .06 | 2.3 | 23 | <.01 |
| | 03-04-86 | .80 | 2.7 | 1.2 | 10 | .1 | 5.1 | .06 | 2.4 | 24 | .01 |
| 453051089342800 | 08-04-86 | 2.9 | 11 | 1.4 | 20 | 11 | 17 | <.10 | 16 | 84 | -- |
| 453055089343120 | 10-17-85 | 2.2 | 10 | 1.1 | 10 | 14 | 20 | <.10 | 18 | 81 | -- |
| | 10-17-85 | 2.2 | 11 | 1.1 | 16 | 14 | 19 | <.10 | 18 | 85 | -- |
| | 12-05-85 | 2.4 | 10 | 1.0 | 16 | 15 | 18 | <.10 | 17 | 83 | -- |
| | 12-05-85 | 2.3 | 10 | 1.1 | 15 | 15 | 18 | <.10 | 17 | 82 | -- |
| | 04-01-86 | 2.2 | 9.6 | 1.0 | 15 | 12 | 17 | .20 | 16 | 76 | -- |
| | 05-06-86 | 2.2 | 9.9 | 1.1 | 15 | 13 | 17 | <.10 | 17 | 79 | -- |
| | 06-03-86 | 2.2 | 10 | 1.1 | 15 | -- | -- | <.10 | 17 | 59 | -- |
| | 07-01-86 | 2.1 | 10 | 1.2 | 15 | -- | -- | <.10 | 17 | -- | -- |
| | 08-04-86 | 2.2 | 11 | 1.2 | 15 | 15 | 16 | <.10 | 19 | 83 | -- |
| | 09-02-86 | 2.1 | -- | 1.3 | 15 | 16 | 15 | <.10 | 19 | 73 | -- |
| 453056089343611 | 08-04-86 | 3.0 | 3.5 | .60 | 36 | 14 | 4.5 | <.10 | 23 | 80 | -- |

| STATION NUMBER | DATE OF SAMPLE | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608) | PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671) | ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106) | IRON, DIS- SOLVED (UG/L AS FE) (01046) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|
| 453047089340421 | 10-17-85 | -- | .244 | .006 | 120 | 1100 | 55 | 4.6 |
| | 12-05-85 | -- | .266 | .002 | 160 | 1500 | 65 | 6.3 |
| | 01-13-86 | -- | .260 | .002 | 210 | 1700 | 73 | 3.9 |
| | 03-04-86 | -- | .240 | .002 | 190 | 1700 | 70 | 5.5 |
| 453051089342800 | 08-04-86 | 3.5 | .072 | .001 | 20 | -- | -- | 2.7 |
| 453055089343120 | 10-17-85 | .10 | .048 | .004 | 20 | 4 | <1 | 3.4 |
| | 10-17-85 | .11 | .013 | .014 | 10 | 4 | <1 | 2.4 |
| | 12-05-85 | <.10 | .013 | .005 | 20 | 10 | <1 | 3.3 |
| | 12-05-85 | .11 | .008 | .005 | 10 | 10 | <1 | 2.8 |
| | 04-01-86 | .29 | .007 | .002 | 20 | 4 | <1 | 1.3 |
| | 05-06-86 | .21 | .012 | .004 | 10 | 4 | <1 | 2.0 |
| | 06-03-86 | .21 | .012 | .005 | 20 | 3 | 2 | 2.2 |
| | 07-01-86 | .20 | .007 | .005 | 20 | 7 | <1 | 1.4 |
| | 08-04-86 | .21 | .011 | .005 | 20 | 7 | 1 | 1.9 |
| | 09-02-86 | .17 | .006 | .005 | 0 | 12 | <1 | 1.6 |
| 453056089343611 | 08-04-86 | <.10 | .038 | .010 | 10 | -- | -- | 3.1 |

**SAMPLES WITH SAME DATES ARE REPLICATES.

## STAGE RECORDS

### 455909089405602 VANDERCOOK LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of Woodruff.

DRAINAGE AREA.--1.11 mi$^2$. Area of lake, 0.17 mi$^2$.

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lakes does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 32.26 ft, Apr. 8-10, 1986; minimum observed gage height, 30.74 ft, Sept. 28 and 29, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 32.26 ft, Apr. 8-10; minimum observed gage height, 31.63 ft, Oct. 1-3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.63 | 31.83 | 32.00 | 31.99 | 32.04 | 32.02 | 32.19 | 32.15 | 31.87 | 31.80 | 31.94 | 31.76 |
| 2 | 31.63 | 31.88 | 32.01 | 31.98 | 32.04 | 32.02 | 32.18 | 32.14 | 31.85 | 31.80 | 31.96 | 31.76 |
| 3 | 31.63 | 31.87 | 32.00 | 31.99 | 32.04 | 32.02 | 32.18 | 32.13 | 31.83 | 31.77 | 31.94 | 31.77 |
| 4 | 31.73 | 31.87 | 32.01 | 31.99 | 32.04 | 32.01 | 32.19 | 32.13 | 31.83 | 31.79 | 31.93 | 31.87 |
| 5 | 31.83 | 31.86 | 32.01 | 32.00 | 32.04 | 32.01 | 32.21 | 32.14 | 31.81 | 31.81 | 31.95 | 31.86 |
| 6 | 31.82 | 31.86 | 32.01 | 31.99 | 32.03 | 32.02 | 32.23 | 32.13 | 31.78 | 31.82 | 31.94 | 31.83 |
| 7 | 31.82 | 31.86 | 32.01 | 31.98 | 32.03 | 32.02 | 32.25 | 32.11 | 31.78 | 31.80 | 31.95 | 31.82 |
| 8 | 31.85 | 31.84 | 32.00 | 31.98 | 32.03 | 32.01 | 32.26 | 32.09 | 31.79 | 31.79 | 31.97 | 31.81 |
| 9 | 31.82 | 31.83 | 32.01 | 32.00 | 32.02 | 32.01 | 32.26 | 32.08 | 31.77 | 31.77 | 31.95 | 31.79 |
| 10 | 31.82 | 31.82 | 32.01 | 31.99 | 32.02 | 32.07 | 32.26 | 32.07 | 31.76 | 31.76 | 31.96 | 31.82 |
| 11 | 31.81 | 31.81 | 32.00 | 31.99 | 32.01 | 32.07 | 32.24 | 32.06 | 31.78 | 31.76 | 31.94 | 31.83 |
| 12 | 31.84 | 31.80 | 31.99 | 32.00 | 32.01 | 32.07 | 32.23 | 32.07 | 31.80 | 31.82 | 31.93 | 31.92 |
| 13 | 31.85 | 31.80 | 31.98 | 31.99 | 32.00 | 32.07 | 32.22 | 32.06 | 31.80 | 31.93 | 31.91 | 31.81 |
| 14 | 31.84 | 31.80 | 31.98 | 31.99 | 32.01 | 32.08 | 32.22 | 32.07 | 31.79 | 31.91 | 31.91 | 31.80 |
| 15 | 31.83 | 31.79 | 32.00 | 31.99 | 32.01 | 32.08 | 32.23 | 32.06 | 31.78 | 31.91 | 31.92 | 31.85 |
| 16 | 31.82 | 31.82 | 31.99 | 31.99 | 32.01 | 32.08 | 32.23 | 32.06 | 31.77 | 31.91 | 31.91 | 31.85 |
| 17 | 31.81 | 31.83 | 31.98 | 32.00 | 32.00 | 32.08 | 32.16 | 32.04 | 31.75 | 31.92 | 31.93 | 31.84 |
| 18 | 31.81 | 31.83 | 31.98 | 32.00 | 32.01 | 32.12 | 32.16 | 32.03 | 31.73 | 31.92 | 31.92 | 31.85 |
| 19 | 31.80 | 31.85 | 31.98 | 32.00 | 32.00 | 32.17 | 32.15 | 32.01 | 31.81 | 32.02 | 31.89 | 31.84 |
| 20 | 31.79 | 31.88 | 31.98 | 32.00 | 32.02 | 32.17 | 32.15 | 31.99 | 31.81 | 32.01 | 31.87 | 31.85 |
| 21 | 31.79 | 31.87 | 31.98 | 32.00 | 32.01 | 32.16 | 32.14 | 31.98 | 31.82 | 31.99 | 31.86 | 31.85 |
| 22 | 31.78 | 31.89 | 31.99 | 32.02 | 32.02 | 32.17 | 32.13 | 31.96 | 31.86 | 31.98 | 31.85 | 31.93 |
| 23 | 31.79 | 31.90 | 32.00 | 32.01 | 32.02 | 32.16 | 32.12 | 31.96 | 31.85 | 31.97 | 31.87 | 31.92 |
| 24 | 31.80 | 31.90 | 32.00 | 32.02 | 32.02 | 32.15 | 32.12 | 31.95 | 31.84 | 31.98 | 31.85 | 31.92 |
| 25 | 31.77 | 31.90 | 31.99 | 32.03 | 32.02 | 32.16 | 32.12 | 31.94 | 31.83 | 32.00 | 31.85 | 31.95 |
| 26 | 31.77 | 31.92 | 32.00 | 32.02 | 32.02 | 32.15 | 32.15 | 31.94 | 31.84 | 31.98 | 31.84 | 31.96 |
| 27 | 31.76 | 31.91 | 31.98 | 32.02 | 32.02 | 32.15 | 32.15 | 31.94 | 31.87 | 31.99 | 31.82 | 31.98 |
| 28 | 31.75 | 31.93 | 32.00 | 32.02 | 32.01 | 32.15 | 32.15 | 31.92 | 31.86 | 31.99 | 31.80 | 31.98 |
| 29 | 31.74 | 31.93 | 32.00 | 32.02 | --- | 32.16 | 32.17 | 31.92 | 31.84 | 31.97 | 31.79 | 32.00 |
| 30 | 31.73 | 31.96 | 31.99 | 32.02 | --- | 32.16 | 32.17 | 31.91 | 31.82 | 31.96 | 31.78 | 31.99 |
| 31 | 31.73 | --- | 31.99 | 32.02 | --- | 32.16 | --- | 31.90 | --- | 31.95 | 31.77 | --- |
| MEAN | 31.78 | 31.86 | 32.00 | 32.00 | 32.02 | 32.09 | 32.19 | 32.03 | 31.81 | 31.90 | 31.89 | 31.86 |
| MAX | 31.85 | 31.96 | 32.01 | 32.03 | 32.04 | 32.17 | 32.26 | 32.15 | 31.87 | 32.02 | 31.97 | 32.00 |
| MIN | 31.63 | 31.79 | 31.98 | 31.98 | 32.00 | 32.01 | 32.12 | 31.90 | 31.73 | 31.76 | 31.77 | 31.76 |

CAL YR 1985 MEAN 31.67 MAX 32.01 MIN 31.40
WTR YR 1986 MEAN 31.95 MAX 32.26 MIN 31.63

## PRECIPITATION QUANTITY

### 455909089405603 VANDERCOOK LAKE RAIN GAGE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of Woodruff.

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.98 in., Aug. 10, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.35 in., Oct. 4.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .12 | 1.77 | | | | | --- | .01 | .00 | .00 | .59 | .04 |
| 2 | .01 | .09 | | | | | --- | .01 | .00 | .00 | .01 | .00 |
| 3 | .32 | .01 | | | | | --- | .00 | .00 | .00 | .01 | 1.16 |
| 4 | 2.35 | .02 | | | | | --- | .00 | .01 | .64 | .42 | .61 |
| 5 | .15 | .00 | | | | | --- | .00 | .00 | .16 | .24 | .01 |
| 6 | .01 | .07 | | | | | --- | .00 | .00 | .04 | .00 | .00 |
| 7 | .30 | .00 | | | | | --- | .00 | .23 | .00 | .33 | .00 |
| 8 | .09 | .00 | | | | | --- | .00 | .00 | .00 | .10 | .00 |
| 9 | .01 | .00 | | | | | --- | .00 | .00 | .00 | .00 | .35 |
| 10 | .01 | .02 | | | | | --- | .00 | .00 | .00 | .39 | .27 |
| 11 | .03 | .00 | | | | | --- | .06 | .99 | .69 | .01 | .12 |
| 12 | .47 | .00 | | | | | --- | .00 | .02 | 1.74 | .00 | .12 |
| 13 | .00 | .00 | | | | | --- | .15 | .00 | .01 | .00 | .01 |
| 14 | .00 | .05 | | | | | --- | .01 | .00 | .00 | .28 | .48 |
| 15 | .00 | .00 | | | | | --- | .00 | .00 | .08 | .02 | .34 |
| 16 | .01 | .00 | | | | | --- | .00 | .00 | .01 | .32 | .00 |
| 17 | .00 | .00 | | | | | .00 | .00 | .00 | .00 | .01 | .17 |
| 18 | .00 | .78 | | | | | .04 | .00 | .00 | 1.02 | .00 | .01 |
| 19 | .00 | .00 | | | | | .08 | .00 | 1.09 | .33 | .00 | .08 |
| 20 | .00 | .00 | | | | | .02 | .00 | .00 | .00 | .06 | .03 |
| 21 | .00 | .00 | | | | | .03 | .00 | .61 | .00 | .01 | .98 |
| 22 | .00 | --- | | | | | .00 | .00 | .01 | .00 | .36 | .03 |
| 23 | .06 | --- | | | | | .00 | .00 | .24 | .00 | .01 | .01 |
| 24 | .00 | --- | | | | | .00 | .00 | .00 | .60 | .01 | .00 |
| 25 | .00 | --- | | | | | .31 | .03 | .19 | .00 | .11 | .52 |
| 26 | .00 | --- | | | | | .10 | .00 | .48 | .01 | .04 | .07 |
| 27 | .00 | --- | | | | | .02 | .00 | .00 | .38 | .04 | .24 |
| 28 | .00 | --- | | | | | .12 | .00 | .00 | .00 | .00 | .45 |
| 29 | .01 | --- | | | | | .24 | .00 | .00 | .00 | .01 | .00 |
| 30 | .00 | --- | | | | | .08 | .00 | .00 | .00 | .00 | .00 |
| 31 | .16 | --- | | | | | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 4.11 | 2.81 | | | | | 1.04 | 0.27 | 3.87 | 5.71 | 3.38 | 6.10 |

## GROUND-WATER LEVELS

### 455910089403701 WELL VI-41/07E/31-0085

**LOCATION.**--Lat 45°59'10", long 89°40'37", in SW 1/4 NW 1/4 SW 1/4 sec.31, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07070001, 0.25 mi northeast of Vandercook Lake, about 6.1 mi north of Woodruff.

**AQUIFER.**--Sand and gravel.

**WELL CHARACTERISTICS.**--Augered water-table observation well, diameter 3 in., depth 60 ft, cased to 57 ft, well screened 57-60 ft.

**PERIOD OF RECORD.**--November 1980 to current year.

**GAGE.**--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good, except for period of missing record, Apr. 16 to Oct. 12, 1982.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum observed water level, 33.83 ft, Apr. 14, 1986; minimum observed water level, 31.47 ft, Mar. 27 and 28, 1982.

**EXTREMES FOR CURRENT YEAR.**--Maximum observed water level, 33.83 ft, Apr. 14; minimum observed water level, 32.91 ft, Mar. 20, 27.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 32.93 | 33.31 | 33.39 | 33.28 | 33.18 | 33.02 | 33.04 | 33.72 | 33.68 | 33.59 | 33.44 | 33.26 |
| 2 | 32.94 | 33.32 | 33.35 | 33.23 | 33.17 | 33.02 | 33.17 | 33.69 | 33.68 | 33.59 | 33.43 | 33.25 |
| 3 | 32.98 | 33.33 | 33.31 | 33.28 | 33.16 | 32.99 | 33.26 | 33.70 | 33.68 | 33.58 | 33.42 | 33.25 |
| 4 | 33.02 | 33.35 | 33.35 | 33.28 | 33.18 | 32.99 | 33.34 | 33.75 | 33.67 | 33.57 | 33.42 | 33.27 |
| 5 | 33.12 | 33.38 | 33.36 | 33.32 | 33.16 | 33.01 | 33.44 | 33.75 | 33.67 | 33.57 | 33.40 | 33.25 |
| 6 | 33.24 | 33.40 | 33.34 | 33.26 | 33.14 | 32.99 | 33.51 | 33.75 | 33.67 | 33.55 | 33.39 | 33.24 |
| 7 | 33.29 | 33.41 | 33.38 | 33.22 | 33.16 | 32.97 | 33.62 | 33.74 | 33.67 | 33.54 | 33.39 | 33.23 |
| 8 | 33.31 | 33.38 | 33.38 | 33.26 | 33.15 | 33.01 | 33.68 | 33.71 | 33.65 | 33.54 | 33.39 | 33.23 |
| 9 | 33.28 | 33.37 | 33.35 | 33.29 | 33.14 | 33.03 | 33.72 | 33.70 | 33.64 | 33.51 | 33.38 | 33.23 |
| 10 | 33.29 | 33.35 | 33.36 | 33.26 | 33.12 | 33.01 | 33.75 | 33.70 | 33.64 | 33.51 | 33.37 | 33.25 |
| 11 | 33.29 | 33.34 | 33.38 | 33.31 | 33.12 | 32.95 | 33.78 | 33.70 | 33.64 | 33.49 | 33.36 | 33.24 |
| 12 | 33.32 | 33.37 | 33.40 | 33.29 | 33.12 | 32.95 | 33.79 | 33.69 | 33.65 | 33.49 | 33.36 | 33.22 |
| 13 | 33.29 | 33.37 | 33.39 | 33.27 | 33.13 | 32.98 | 33.81 | 33.69 | 33.65 | 33.51 | 33.36 | 33.20 |
| 14 | 33.30 | 33.36 | 33.39 | 33.27 | 33.13 | 32.98 | 33.83 | 33.69 | 33.65 | 33.51 | 33.36 | 33.19 |
| 15 | 33.30 | 33.34 | 33.38 | 33.27 | 33.11 | 32.96 | 33.82 | 33.69 | 33.65 | 33.50 | 33.35 | 33.19 |
| 16 | 33.27 | 33.39 | 33.37 | 33.28 | 33.10 | 32.94 | 33.79 | 33.68 | 33.65 | 33.50 | 33.34 | 33.18 |
| 17 | 33.30 | 33.35 | 33.36 | 33.29 | 33.11 | 32.94 | 33.79 | 33.68 | 33.64 | 33.50 | 33.32 | 33.21 |
| 18 | 33.29 | 33.37 | 33.33 | 33.27 | 33.10 | 32.94 | 33.81 | 33.68 | 33.63 | 33.49 | 33.31 | 33.21 |
| 19 | 33.27 | 33.40 | 33.32 | 33.25 | 33.09 | 32.94 | 33.81 | 33.68 | 33.63 | 33.48 | 33.31 | 33.19 |
| 20 | 33.28 | 33.39 | 33.32 | 33.25 | 33.07 | 32.91 | 33.80 | 33.67 | 33.64 | 33.48 | 33.30 | 33.18 |
| 21 | 33.29 | 33.33 | 33.34 | 33.28 | 33.06 | 32.92 | 33.78 | 33.67 | 33.64 | 33.48 | 33.30 | 33.18 |
| 22 | 33.30 | 33.37 | 33.38 | 33.22 | 33.08 | 32.96 | 33.76 | 33.67 | 33.62 | 33.48 | 33.32 | 33.21 |
| 23 | 33.32 | 33.38 | 33.36 | 33.21 | 33.06 | 32.92 | 33.77 | 33.67 | 33.62 | 33.48 | 33.33 | 33.23 |
| 24 | 33.30 | 33.34 | 33.32 | 33.26 | 33.04 | 32.92 | 33.77 | 33.67 | 33.62 | 33.48 | 33.32 | 33.23 |
| 25 | 33.27 | 33.35 | 33.32 | 33.27 | 33.06 | 32.97 | 33.77 | 33.67 | 33.62 | 33.48 | 33.32 | 33.22 |
| 26 | 33.29 | 33.38 | 33.37 | 33.22 | 33.08 | 32.94 | 33.78 | 33.67 | 33.61 | 33.48 | 33.30 | 33.20 |
| 27 | 33.25 | 33.34 | 33.32 | 33.23 | 33.02 | 32.91 | 33.77 | 33.67 | 33.61 | 33.47 | 33.29 | 33.20 |
| 28 | 33.24 | 33.36 | 33.32 | 33.25 | 33.01 | 32.92 | 33.77 | 33.67 | 33.60 | 33.47 | 33.29 | 33.19 |
| 29 | 33.26 | 33.33 | 33.31 | 33.20 | --- | 32.92 | 33.77 | 33.68 | 33.60 | 33.47 | 33.28 | 33.22 |
| 30 | 33.26 | 33.34 | 33.33 | 33.17 | --- | 32.93 | 33.76 | 33.68 | 33.60 | 33.47 | 33.27 | 33.20 |
| 31 | 33.28 | --- | 33.30 | 33.15 | --- | 32.98 | --- | 33.68 | --- | 33.44 | 33.26 | --- |
| MEAN | 33.24 | 33.36 | 33.35 | 33.26 | 33.11 | 32.96 | 33.68 | 33.69 | 33.64 | 33.51 | 33.34 | 33.22 |
| MAX | 33.32 | 33.41 | 33.40 | 33.32 | 33.18 | 33.03 | 33.83 | 33.75 | 33.68 | 33.59 | 33.44 | 33.27 |
| MIN | 32.93 | 33.31 | 33.30 | 33.15 | 33.01 | 32.91 | 33.04 | 33.67 | 33.60 | 33.44 | 33.26 | 33.18 |

CAL YR 1985 MEAN 32.80 MAX 33.41 MIN 31.85
WTR YR 1986 MEAN 33.36 MAX 33.83 MIN 32.91

# ACID DEPOSITION RECORDS

## VANDERCOOK LAKE

## QUALITY OF SURFACE WATER

### WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

455909089405602 - VANDERCOOK LAKE NEAR WOODRUFF, WI (LAT 45 59 09 LONG 089 40 56)

| DATE | TIME | SAMPLING DEPTH (FEET) (00003) | SPECIFIC CONDUCTANCE (US/CM) (00095) | PH (STANDARD UNITS) (00400) | TEMPERATURE (DEG C) (00010) | OXYGEN, DISSOLVED (MG/L) (00300) | ACIDITY (MG/L AS H) (71825) | CALCIUM DISSOLVED (MG/L AS CA) (00915) | MAGNESIUM, DISSOLVED (MG/L AS MG) (00925) | SODIUM, DISSOLVED (MG/L AS NA) (00930) | POTASSIUM, DISSOLVED (MG/L AS K) (00935) | ALKALINITY LAB (MG/L AS CACO3) (90410) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | | |
| 16... | 1650 | 3.00 | 13 | 6.00 | 10.0 | 10.2 | <.1 | 1.3 | .36 | .70 | .11 | 3.0 |
| DEC | | | | | | | | | | | | |
| 16... | 1145 | 3.00 | 15 | 6.20 | 2.0 | 11.6 | .05 | 1.2 | .40 | .40 | .36 | <.5 |
| JAN , 1986 | | | | | | | | | | | | |
| 14... | 1250 | 3.00 | 13 | 6.10 | 2.0 | -- | .05 | 1.1 | .30 | .50 | .22 | .8 |
| ** 14... | 1255 | 18.0 | 15 | 5.80 | 5.0 | 4.5 | .08 | 1.2 | .30 | .50 | .34 | 1.6 |
| ** 14... | 1256 | 18.0 | 15 | 5.70 | 5.0 | 4.5 | .05 | 1.1 | .30 | .50 | .33 | 1.5 |
| MAR | | | | | | | | | | | | |
| 03... | 1305 | 3.00 | 14 | 5.80 | 4.0 | 10.4 | .06 | 1.1 | .40 | .50 | .26 | .9 |
| 03... | 1310 | 18.0 | 16 | 5.60 | 5.0 | 4.5 | .08 | 1.2 | .40 | .50 | .33 | .9 |
| 31... | 1325 | 3.00 | 12 | 5.60 | 4.5 | 5.3 | .03 | .90 | .30 | .50 | .21 | <.5 |
| 31... | 1335 | 18.0 | 15 | 5.60 | 4.0 | 4.3 | .02 | 1.1 | .30 | .50 | .34 | 1.3 |
| MAY | | | | | | | | | | | | |
| 05... | 1320 | 3.00 | 13 | 6.10 | 13.0 | 10.7 | .02 | 1.1 | .30 | .60 | .13 | .8 |
| 05... | 1330 | 20.0 | 13 | 6.10 | 11.0 | 11.0 | .03 | 1.1 | .30 | .50 | .14 | .8 |
| JUN | | | | | | | | | | | | |
| 02... | 1245 | 3.00 | 13 | 5.90 | 19.5 | 9.0 | .03 | 1.1 | .40 | .60 | .14 | .7 |
| 02... | 1255 | 18.0 | 13 | 5.70 | 17.0 | 9.5 | .04 | 1.2 | .40 | .60 | .17 | 1.0 |
| 30... | 1215 | 3.00 | 14 | 6.00 | 22.0 | 8.3 | .02 | 1.1 | .30 | .60 | .20 | .7 |
| 30... | 1240 | 18.0 | 14 | 5.70 | 20.5 | 5.3 | .05 | 1.4 | .40 | .80 | .25 | 1.6 |
| AUG | | | | | | | | | | | | |
| 05... | 0855 | 3.00 | 14 | 6.00 | 23.0 | 7.2 | .02 | 1.3 | .40 | .60 | .18 | 1.0 |
| 05... | 0900 | 15.0 | 14 | 6.00 | 23.0 | -- | .02 | 1.2 | .40 | .60 | .18 | 1.0 |
| SEP | | | | | | | | | | | | |
| 03... | 0845 | 3.00 | 13 | 6.10 | 20.0 | 9.0 | .03 | 1.1 | .50 | .50 | .26 | .8 |
| ** 03... | 0850 | 18.0 | 13 | 6.10 | 19.0 | 8.0 | .03 | 1.1 | .50 | .50 | .21 | .8 |
| ** 03... | 0851 | 18.0 | 14 | 6.10 | 19.0 | 8.0 | .02 | 1.2 | .50 | .50 | .29 | .8 |

455909089405602 - VANDERCOOK LAKE NEAR WOODRUFF, WI (LAT 45 59 09 LONG 089 40 56)

| DATE | SULFATE DISSOLVED (MG/L AS SO4) (00945) | CHLORIDE, DISSOLVED (MG/L AS CL) (00940) | FLUORIDE, DISSOLVED (MG/L AS F) (00950) | SILICA, DISSOLVED (MG/L AS SIO2) (00955) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671) | ALUMINUM, DISSOLVED (UG/L AS AL) (01106) | IRON, DISSOLVED (UG/L AS FE) (01046) | MANGANESE, DISSOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT , 1985 | | | | | | | | | | | | |
| 16... | 3.8 | .25 | .03 | <.01 | -- | <.01 | .011 | <.001 | 10 | 5 | 5 | 4.2 |
| DEC | | | | | | | | | | | | |
| 16... | 3.7 | .30 | .03 | .04 | -- | <.01 | .023 | .003 | 20 | 10 | 4 | 4.3 |
| JAN , 1986 | | | | | | | | | | | | |
| 14... | 3.7 | .27 | .05 | .04 | 7 | <.01 | .023 | .001 | 20 | 10 | 6 | 4.4 |
| 14... | 3.6 | .28 | .05 | .2 | 8 | <.01 | .220 | .001 | 30 | 10 | 13 | 4.2 |
| 14... | 3.6 | .28 | .05 | .1 | 7 | <.01 | .230 | <.001 | 20 | 12 | 14 | 3.9 |
| MAR | | | | | | | | | | | | |
| 03... | 3.7 | .28 | .05 | .1 | 7 | .02 | .060 | <.001 | 20 | 15 | 5 | 4.5 |
| 03... | 3.7 | .26 | .04 | .3 | 8 | .02 | .240 | .001 | 10 | 15 | 15 | 4.0 |
| 31... | 3.2 | .30 | .03 | .1 | -- | .09 | .100 | .001 | 20 | 5 | 5 | 3.1 |
| 31... | 3.7 | .36 | .05 | .2 | 8 | .08 | .170 | <.001 | 20 | 10 | 16 | 3.2 |
| MAY | | | | | | | | | | | | |
| 05... | 3.8 | .28 | .03 | .2 | 7 | .04 | .022 | <.001 | 10 | 5 | 10 | 3.9 |
| 05... | 3.7 | .28 | .04 | .2 | 7 | .05 | .022 | <.001 | 10 | 5 | 9 | 4.4 |
| JUN | | | | | | | | | | | | |
| 02... | 3.4 | .28 | .04 | .04 | 6 | <.01 | .021 | <.001 | 20 | 3 | 2 | 4.9 |
| 02.. | 3.4 | .28 | .04 | .04 | 7 | <.01 | .015 | <.001 | 20 | 13 | 15 | 4.8 |
| 30... | 3.9 | .29 | .04 | .05 | 7 | <.01 | .011 | <.001 | 10 | 10 | 1 | 3.7 |
| 30... | 3.7 | .29 | .05 | .06 | 8 | <.01 | .014 | <.001 | 20 | 30 | 23 | 4.0 |
| AUG | | | | | | | | | | | | |
| 05... | 3.6 | .26 | .04 | .03 | 7 | <.01 | .014 | <.001 | 20 | 9 | 4 | 4.3 |
| 05... | 3.5 | .26 | .03 | .03 | 7 | <.01 | .019 | <.001 | 20 | 8 | 4 | 4.3 |
| SEP | | | | | | | | | | | | |
| 03... | 4.0 | .28 | .04 | .06 | 7 | .01 | .015 | <.001 | 0 | 23 | 1 | 4.2 |
| 03... | 3.9 | .28 | .03 | .07 | 7 | .01 | .017 | .002 | 0 | 19 | 1 | 4.2 |
| 03... | 4.0 | .28 | .02 | .07 | 7 | .01 | .025 | .001 | 0 | 19 | 1 | 4.0 |

** SAMPLES WITH SAME DATES AND SAMPLING DEPTHS ARE REPLICATES.

# ACID DEPOSITION RECORDS

## VANDERCOOK LAKE

## QUALITY OF PRECIPITATION

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

455911089405903 - VANDERCOOK LK BULK PRECIP COLL NR WOODRUFF, WI (LAT 45 59 11 LONG 089 40 59)

| DATE | CUMU-LATIVE PRECIP-ITATION (IN) (00045) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | 6.64 | 16 | 4.40 | .2 | .21 | 03 | .50 | .06 | <1.0 | 1.4 |
| NOV 08 - DEC 04 | 2.89 | 12 | 4.60 | .1 | .09 | .10 | <.20 | .03 | <1.0 | .6 |
| DEC 04 - DEC 31 | .71 | 18 | 4.40 | -- | .09 | <.01 | .34 | .07 | -- | 1.0 |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | 1.06 | 22 | 4.40 | -- | .44 | .06 | .27 | .11 | -- | 1.4 |
| JAN 31 - MAR 03 | 1.68 | 21 | 4.40 | -- | .36 | .05 | .25 | .08 | -- | 1.6 |
| MAR 03 - MAR 31 | 2.00 | 20 | 4.50 | -- | .48 | .05 | .26 | .07 | -- | 2.2 |
| MAR 31 - MAY 05 | 2.51 | 14 | 5.00 | -- | .50 | .10 | .22 | .24 | -- | 2.2 |
| MAY 05 - JUN 30 | 4.65 | 16 | 6.00 | -- | .57 | .10 | .22 | .34 | -- | 2.5 |
| AUG 05 - SEP 03 | 2.61 | 26 | 4.40 | -- | .40 | .10 | .24 | .16 | -- | 3.5 |
| SEP 03 - SEP 30 | 6.31 | 13 | 4.60 | -- | .27 | .05 | .34 | .06 | -- | 1.5 |
| SEP 30 - NOV 02 | -- | 18 | 4.40 | -- | .24 | .05 | .25 | .07 | -- | 2.0 |

460307089391203 - TROUT LK BULK PRECIP COLL NR BOULDER JCT, WI (LAT 46 03 07 LONG 089 39 12)

| DATE | CUMU-LATIVE PRECIP-ITATION (IN) (00045) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | 5.99 | 16 | 4.50 | .2 | .24 | .04 | .40 | .74 | <1.0 | 1.6 |
| NOV 08 - DEC 04 | 3.00 | 12 | 4.60 | .2 | .11 | .02 | .20 | .03 | <1.0 | .6 |
| DEC 04 - DEC 31 | .68 | 17 | 4.50 | -- | .09 | <.01 | .42 | .06 | -- | .9 |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | 1.07 | 21 | 4.40 | -- | .36 | .05 | .21 | .09 | -- | 1.2 |
| JAN 31 - MAR 03 | .87 | 19 | 4.40 | -- | .23 | .04 | .19 | .06 | -- | 1.3 |
| MAR 03 - MAR 31 | 3.41 | 22 | 4.50 | -- | .41 | .05 | .31 | .08 | -- | 2.0 |
| MAR 31 - MAY 05 | 2.30 | 17 | 4.90 | -- | .60 | .10 | .26 | .10 | -- | 2.8 |
| MAY 05 - JUN 30 | 3.99 | 16 | 4.80 | -- | .65 | .09 | .29 | .19 | -- | 2.4 |
| JUN 30 - AUG 05 | 7.64 | 9 | 4.80 | -- | .36 | .06 | .24 | .07 | -- | 1.1 |
| AUG 05 - SEP 03 | 2.50 | 31 | 4.30 | -- | .55 | .08 | .27 | .18 | -- | 4.3 |
| SEP 03 - SEP 30 | 4.01 | 13 | 4.60 | -- | .31 | .05 | .29 | .05 | -- | 1.6 |
| SEP 30 - NOV 02 | -- | 20 | 4.40 | -- | .26 | .05 | .23 | .06 | -- | 2.1 |

455911089405903 - VANDERCOOK LK BULK PRECIP COLL NR WOODRUFF, WI (LAT 45 59 11 LONG 089 40 59)

| DATE | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | IRON, DIS-SOLVED (UG/L AS FE) (01046) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | <.20 | .02 | <.01 | .17 | .036 | .010 | 30 | 6 | 16 | 2.2 |
| NOV 08 - DEC 04 | .15 | .03 | <.01 | .22 | .093 | .003 | 10 | 14 | 2 | 4.1 |
| DEC 04 - DEC 31 | .18 | .04 | -- | .41 | .140 | <.010 | -- | -- | -- | -- |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | .23 | .05 | -- | .58 | .310 | .020 | -- | -- | -- | -- |
| JAN 31 - MAR 03 | .17 | .04 | -- | .38 | .230 | <.010 | -- | -- | -- | -- |
| MAR 03 - MAR 31 | .18 | .12 | -- | .42 | .460 | <.010 | -- | -- | -- | -- |
| MAR 31 - MAY 05 | .18 | .02 | -- | .41 | .440 | <.010 | -- | -- | -- | -- |
| MAY 05 - JUN 30 | .19 | .02 | -- | .40 | 1.00 | .070 | -- | -- | -- | -- |
| AUG 05 - SEP 03 | .17 | .03 | -- | .42 | .620 | <.010 | -- | -- | -- | -- |
| SEP 03 - SEP 30 | .11 | .02 | -- | .18 | .220 | .020 | -- | -- | -- | -- |
| SEP 30 NOV 02 | .11 | .01 | -- | .30 | .290 | .020 | -- | -- | -- | -- |

460307089391203 - TROUT LK BULK PRECIP COLL NR BOULDER JCT, WI (LAT 46 03 07 LONG 089 39 12)

| DATE | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | IRON, DIS-SOLVED (UG/L AS FE) (01046) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | | | | | | | | | | |
| OCT 01 - NOV 08 | .02 | <.01 | <.01 | .22 | .217 | .002 | 10 | <3 | 3 | 1.5 |
| NOV 08 - DEC 04 | <.01 | <.01 | .01 | .21 | .099 | .002 | 20 | 13 | 3 | 1.8 |
| DEC 04 - DEC 31 | .19 | <.01 | -- | .38 | .110 | <.010 | -- | -- | -- | -- |
| 1986 | | | | | | | | | | |
| JAN 01 - JAN 31 | .18 | .04 | -- | .54 | .290 | .020 | -- | -- | -- | -- |
| JAN 31 - MAR 03 | .14 | <.01 | -- | .34 | .210 | <.010 | -- | -- | -- | -- |
| MAR 03 - MAR 31 | .13 | .06 | -- | .35 | .380 | <.010 | -- | -- | -- | -- |
| MAR 31 - MAY 05 | .16 | .01 | -- | .48 | .580 | <.010 | -- | -- | -- | -- |
| MAY 05 - JUN 30 | .19 | .02 | -- | .39 | .550 | <.010 | -- | -- | -- | -- |
| JUN 30 - AUG 05 | .14 | .02 | -- | .27 | .210 | <.010 | -- | -- | -- | -- |
| AUG 05 - SEP 03 | .18 | .03 | -- | .49 | .720 | <.010 | -- | -- | -- | -- |
| SEP 03 - SEP 30 | .12 | .02 | -- | .21 | .230 | .020 | -- | -- | -- | -- |
| SEP 30 - NOV 02 | .12 | .01 | -- | .34 | .250 | .020 | -- | -- | -- | -- |

# ACID DEPOSITION RECORDS

## VANDERCOOK LAKE

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

| STATION NUMBER | LOCAL IDENT-I-FIER | GEO-LOGIC UNIT | DATE OF SAMPLE | DEPTH OF WELL, TOTAL (FEET) (72008) | SPE-CIFIC CON-DUC-TANCE (US/CM) (00095) | PH (STAND-ARD UNITS) (00400) | TEMPER-ATURE (DEG C) (00010) | ACIDITY (MG/L AS H) (71825) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) |
|---|---|---|---|---|---|---|---|---|---|
| | | | VILAS | | | | | | |
| 455901089412020 | VI-41/06E/36-0875 | 110QRNR | 10-16-85 | 11.00 | 16 | 5.90 | 11.0 | .2 | 1.1 |
| | | 110QRNR | 12-05-85 | 11.00 | 16 | 5.80 | 3.0 | .1 | 1.3 |
| | | 110QRNR | 01-14-86 | 11.00 | 15 | 5.90 | 2.5 | .07 | 1.1 |
| | | 110QRNR | 03-03-86 | 11.00 | 16 | 5.80 | 3.0 | .1 | 1.1 |
| 455904089404711 | VI-41/06E/36-0957 | 110QRNR | 10-16-85 | 21.00 | 56 | 6.40 | 8.5 | .2 | 6.9 |
| | | 110QRNR | 12-05-85 | 21.00 | 53 | 6.40 | 7.0 | .3 | 7.0 |
| | | 110QRNR | 01-14-86 | 21.00 | 53 | 6.50 | 7.0 | .04 | 6.3 |
| | | 110QRNR | 03-03-86 | 21.00 | 52 | 6.40 | 5.5 | .09 | 6.4 |
| | | 110QRNR | 03-31-86 | 21.00 | 55 | 6.50 | 6.0 | .06 | 6.4 |
| | | 110QRNR | 05-05-86 | 21.00 | 55 | 6.50 | 7.0 | <.01 | 6.6 |
| | | 110QRNR | 06-02-86 | 21.00 | 55 | 6.30 | 7.0 | .06 | 6.8 |
| | | 110QRNR | 06-30-86 | 21.00 | 55 | 6.40 | 7.0 | .07 | 6.7 |
| | | 110QRNR | 08-05-86 | 21.00 | 59 | 6.30 | 9.0 | .03 | 6.7 |
| | | 110QRNR | 09-03-86 | 21.00 | 56 | 6.30 | 9.0 | .07 | 6.3 |

| STATION NUMBER | DATE OF SAMPLE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925) | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935) | ALKA-LINITY LAB (MG/L AS CACO3) (90410) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 455901089412020 | 10-16-85 | .35 | .40 | .34 | 3.0 | .9 | .34 | <.01 | .8 | 7 | <.01 |
| | 12-05-85 | .53 | .60 | .21 | 2.0 | 3.9 | .19 | <.01 | .4 | 9 | <.01 |
| | 01-14-86 | .40 | .50 | .23 | 1.5 | 3.0 | .36 | .05 | .4 | 8 | <.01 |
| | 03-03-86 | .40 | .60 | .21 | 2.2 | 2.3 | .29 | .03 | .6 | 8 | <.01 |
| 455904089404711 | 10-16-85 | 1.6 | 2.2 | .45 | 18 | 7.8 | .48 | .12 | 17 | 47 | <.01 |
| | 12-05-85 | 1.7 | 2.3 | .31 | 20 | 7.2 | .24 | .09 | 17 | 48 | .05 |
| | 01-14-86 | 1.4 | 2.1 | .39 | 18 | 7.6 | .30 | .10 | 17 | 46 | .04 |
| | 03-03-86 | 1.5 | 2.1 | .36 | 19 | 7.4 | .31 | .07 | 17 | 47 | .08 |
| | 03-31-86 | 1.5 | 2.1 | .42 | 18 | 7.4 | .32 | .08 | 17 | 46 | .04 |
| | 05-05-86 | 1.5 | 2.2 | .35 | 19 | 7.5 | .32 | .09 | 17 | 47 | .07 |
| | 06-02-86 | 1.6 | 2.2 | .38 | 19 | 7.3 | .32 | .08 | 17 | 47 | .05 |
| | 06-30-86 | 2.2 | 2.2 | .35 | 19 | 7.3 | .33 | .07 | 16 | 47 | .05 |
| | 08-05-86 | 1.6 | 2.2 | .33 | 20 | 7.6 | .32 | .07 | 17 | 48 | .07 |
| | 09-03-86 | 2.3 | 2.1 | .40 | 20 | 7.6 | .32 | .07 | 16 | 48 | .09 |

| STATION NUMBER | DATE OF SAMPLE | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106) | IRON, DIS-SOLVED (UG/L AS FE) (01046) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681) |
|---|---|---|---|---|---|---|---|---|
| 455901089412020 | 10-16-85 | -- | .213 | .010 | 120 | 890 | 14 | 4.3 |
| | 12-05-85 | -- | .144 | .004 | 80 | 780 | 13 | 7.0 |
| | 01-14-86 | -- | .100 | .002 | 90 | 670 | 14 | 6.6 |
| | 03-03-86 | -- | .140 | .002 | 80 | 730 | 15 | 3.9 |
| 455904089404711 | 10-16-85 | -- | .027 | .011 | 20 | 6 | 5 | 3.0 |
| | 12-05-85 | -- | .011 | .008 | 20 | 19 | 1 | 2.5 |
| | 01-14-86 | -- | .002 | .006 | 20 | 16 | 2 | 1.7 |
| | 03-03-86 | -- | <.001 | .005 | 10 | 5 | <1 | 1.3 |
| | 03-31-86 | -- | <.001 | <.001 | 10 | <2 | <1 | 1.6 |
| | 05-05-86 | -- | .009 | .007 | 10 | <2 | <1 | 1.7 |
| | 06-02-86 | -- | .009 | .006 | 20 | <2 | 1 | 1.4 |
| | 06-30-86 | -- | .003 | .002 | 20 | 6 | <1 | .90 |
| | 08-05-86 | -- | .006 | .006 | 0 | 6 | <1 | 1.2 |
| | 09-03-86 | -- | .007 | .002 | 0 | 14 | 1 | 1.0 |

## STAGE RECORDS

### 455946089415702 LITTLE ROCK LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'46", long 89°41'57", in NW 1/4 NW 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, 7 mi north of Woodruff, 800 ft west of U.S. Highway 57, and 200 ft southeast of boat landing.

DRAINAGE AREA.--0.22 mi$^2$. Area of lake, 0.07 mi$^2$.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.- Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 28.10 ft, Apr. 7-9, 1986; minimum observed gage height, 27.12 ft, July 31, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 28.10 ft, Apr. 7-9; minimum observed gage height, 27.58 ft, Oct. 3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27.59 | 27.80 | 27.96 | 27.93 | 27.90 | 27.84 | 28.04 | 28.07 | 27.76 | 27.68 | 27.78 | 27.62 |
| 2 | 27.59 | 27.86 | 27.98 | 27.93 | 27.91 | 27.84 | 28.04 | 28.05 | 27.73 | 27.67 | 27.82 | 27.61 |
| 3 | 27.58 | 27.86 | 27.97 | 27.93 | 27.91 | 27.83 | 28.05 | 28.05 | 27.71 | 27.64 | 27.80 | 27.61 |
| 4 | 27.68 | 27.85 | 27.97 | 27.93 | 27.91 | 27.83 | 28.06 | 28.04 | 27.70 | 27.65 | 27.78 | 27.69 |
| 5 | 27.80 | 27.85 | 27.97 | 27.93 | 27.90 | 27.83 | 28.07 | 28.03 | 27.68 | 27.68 | 27.82 | 27.69 |
| 6 | 27.80 | 27.84 | 27.97 | 27.93 | 27.89 | 27.83 | 28.09 | 28.02 | 27.67 | 27.69 | 27.82 | 27.66 |
| 7 | 27.79 | 27.84 | 27.97 | 27.92 | 27.89 | 27.83 | 28.10 | 28.00 | 27.67 | 27.67 | 27.82 | 27.65 |
| 8 | 27.82 | 27.83 | 27.97 | 27.91 | 27.88 | 27.82 | 28.10 | 27.99 | 27.67 | 27.66 | 27.82 | 27.63 |
| 9 | 27.81 | 27.83 | 27.97 | 27.92 | 27.87 | 27.82 | 28.10 | 27.98 | 27.66 | 27.64 | 27.81 | 27.62 |
| 10 | 27.80 | 27.81 | 27.97 | 27.92 | 27.86 | 27.87 | 28.09 | 27.97 | 27.65 | 27.63 | 27.81 | 27.63 |
| 11 | 27.79 | 27.81 | 27.97 | 27.92 | 27.85 | 27.87 | 28.09 | 27.96 | 27.67 | 27.63 | 27.80 | 27.64 |
| 12 | 27.81 | 27.80 | 27.96 | 27.92 | 27.85 | 27.86 | 28.08 | 27.96 | 27.70 | 27.68 | 27.78 | 27.64 |
| 13 | 27.82 | 27.80 | 27.96 | 27.92 | 27.84 | 27.87 | 28.07 | 27.96 | 27.69 | 27.83 | 27.77 | 27.64 |
| 14 | 27.82 | 27.79 | 27.95 | 27.91 | 27.84 | 27.87 | 28.07 | 27.96 | 27.68 | 27.81 | 27.75 | 27.63 |
| 15 | 27.81 | 27.78 | 27.95 | 27.91 | 27.84 | 27.87 | 28.08 | 27.96 | 27.67 | 27.80 | 27.77 | 27.67 |
| 16 | 27.79 | 27.80 | 27.95 | 27.90 | 27.84 | 27.87 | 28.08 | 27.95 | 27.65 | 27.80 | 27.77 | 27.67 |
| 17 | 27.78 | 27.82 | 27.95 | 27.90 | 27.84 | 27.87 | 28.07 | 27.94 | 27.64 | 27.80 | 27.78 | 27.66 |
| 18 | 27.78 | 27.82 | 27.94 | 27.90 | 27.84 | 27.92 | 28.07 | 27.92 | 27.62 | 27.79 | 27.76 | 27.67 |
| 19 | 27.77 | 27.83 | 27.94 | 27.90 | 27.83 | 27.98 | 28.07 | 27.90 | 27.69 | 27.89 | 27.74 | 27.67 |
| 20 | 27.77 | 27.87 | 27.94 | 27.90 | 27.85 | 27.96 | 28.07 | 27.89 | 27.70 | 27.89 | 27.72 | 27.67 |
| 21 | 27.76 | 27.87 | 27.93 | 27.90 | 27.84 | 27.96 | 28.07 | 27.87 | 27.70 | 27.87 | 27.72 | 27.67 |
| 22 | 27.76 | 27.87 | 27.94 | 27.92 | 27.84 | 27.96 | 28.06 | 27.86 | 27.75 | 27.85 | 27.71 | 27.75 |
| 23 | 27.75 | 27.88 | 27.94 | 27.91 | 27.85 | 27.96 | 28.05 | 27.85 | 27.74 | 27.83 | 27.72 | 27.75 |
| 24 | 27.75 | 27.88 | 27.94 | 27.90 | 27.84 | 27.95 | 28.04 | 27.84 | 27.73 | 27.84 | 27.71 | 27.75 |
| 25 | 27.75 | 27.88 | 27.94 | 27.91 | 27.84 | 27.95 | 28.04 | 27.84 | 27.71 | 27.86 | 27.71 | 27.77 |
| 26 | 27.74 | 27.89 | 27.94 | 27.91 | 27.84 | 27.96 | 28.06 | 27.83 | 27.71 | 27.83 | 27.71 | 27.78 |
| 27 | 27.73 | 27.89 | 27.94 | 27.90 | 27.84 | 27.96 | 28.07 | 27.82 | 27.75 | 27.84 | 27.69 | 27.79 |
| 28 | 27.72 | 27.89 | 27.93 | 27.90 | 27.84 | 27.96 | 28.07 | 27.81 | 27.74 | 27.84 | 27.67 | 27.80 |
| 29 | 27.72 | 27.90 | 27.94 | 27.90 | --- | 27.97 | 28.08 | 27.80 | 27.72 | 27.82 | 27.65 | 27.82 |
| 30 | 27.71 | 27.91 | 27.94 | 27.89 | --- | 27.99 | 28.08 | 27.79 | 27.70 | 27.80 | 27.64 | 27.81 |
| 31 | 27.70 | --- | 27.94 | 27.89 | --- | 28.01 | --- | 27.78 | --- | 27.79 | 27.62 | --- |
| TOTAL | 860.29 | 835.35 | 866.53 | 865.26 | 780.07 | 864.91 | 842.11 | 865.69 | 830.86 | 860.70 | 860.27 | 830.66 |
| MEAN | 27.75 | 27.85 | 27.95 | 27.91 | 27.86 | 27.90 | 28.07 | 27.93 | 27.70 | 27.76 | 27.75 | 27.69 |
| MAX | 27.82 | 27.91 | 27.98 | 27.93 | 27.91 | 28.01 | 28.10 | 28.07 | 27.76 | 27.89 | 27.82 | 27.82 |
| MIN | 27.58 | 27.78 | 27.93 | 27.89 | 27.83 | 27.82 | 28.04 | 27.78 | 27.62 | 27.63 | 27.62 | 27.61 |

CAL YR 1985 TOTAL 10070.81 MEAN 27.59 MAX 27.98 MIN 27.26
WTR YR 1986 TOTAL 10162.70 MEAN 27.84 MAX 28.10 MIN 27.58

## GROUND-WATER LEVELS

### 455958089420501 WELL VI-41/06E/26-0895

LOCATION.--Lat 45°59'58", long 89°42'05", in NE 1/4 SE 1/4 SE 1/4 sec.2, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, 0.5 mi northeast of Little Rock Lake, about 7 mi north of Woodruff.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 22 ft, cased to 20 ft, screened 20-22 ft.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 27.08 ft, Apr. 26-28, 1986; minimum observed water level, 25.11 ft, Mar. 21, 25, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 27.08 ft, Apr. 26-28; minimum observed water level, 25.93 ft, Oct. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25.93 | 26.52 | 26.63 | 26.51 | 26.32 | 26.14 | 26.19 | 27.07 | 26.76 | 26.44 | 26.33 | 26.12 |
| 2 | 25.96 | 26.53 | 26.62 | 26.51 | 26.30 | 26.14 | 26.28 | 27.04 | 26.74 | 26.44 | 26.32 | 26.11 |
| 3 | 25.98 | 26.54 | 26.61 | 26.50 | 26.30 | 26.12 | 26.37 | 27.04 | 26.72 | 26.42 | 26.32 | 26.09 |
| 4 | 26.01 | 26.55 | 26.61 | 26.50 | 26.30 | 26.11 | 26.43 | 27.06 | 26.71 | 26.41 | 26.32 | 26.08 |
| 5 | 26.06 | 26.56 | 26.62 | 26.50 | 26.29 | 26.11 | 26.49 | 27.07 | 26.70 | 26.40 | 26.31 | 26.08 |
| 6 | 26.15 | 26.58 | 26.63 | 26.48 | 26.28 | 26.10 | 26.56 | 27.05 | 26.69 | 26.38 | 26.31 | 26.07 |
| 7 | 26.21 | 26.59 | 26.64 | 26.46 | 26.28 | 26.09 | 26.62 | 27.01 | 26.68 | 26.37 | 26.31 | 26.07 |
| 8 | 26.27 | 26.59 | 26.64 | 26.46 | 26.27 | 26.09 | 26.68 | 26.99 | 26.66 | 26.36 | 26.31 | 26.07 |
| 9 | 26.30 | 26.59 | 26.63 | 26.49 | 26.27 | 26.08 | 26.75 | 26.99 | 26.64 | 26.35 | 26.31 | 26.06 |
| 10 | 26.33 | 26.59 | 26.63 | 26.46 | 26.26 | 26.08 | 26.81 | 26.99 | 26.64 | 26.35 | 26.30 | 26.05 |
| 11 | 26.36 | 26.59 | 26.63 | 26.46 | 26.25 | 26.06 | 26.87 | 26.99 | 26.62 | 26.34 | 26.30 | 26.04 |
| 12 | 26.40 | 26.60 | 26.64 | 26.47 | 26.24 | 26.06 | 26.90 | 26.98 | 26.62 | 26.33 | 26.30 | 26.03 |
| 13 | 26.42 | 26.60 | 26.64 | 26.43 | 26.23 | 26.06 | 26.94 | 26.98 | 26.60 | 26.34 | 26.29 | 26.02 |
| 14 | 26.44 | 26.60 | 26.64 | 26.42 | 26.23 | 26.06 | 26.98 | 26.98 | 26.59 | 26.35 | 26.29 | 26.01 |
| 15 | 26.46 | 26.60 | 26.63 | 26.42 | 26.23 | 26.05 | 26.97 | 26.97 | 26.58 | 26.37 | 26.28 | 26.01 |
| 16 | 26.46 | 26.62 | 26.62 | 26.41 | 26.22 | 26.04 | 26.98 | 26.96 | 26.56 | 26.38 | 26.26 | 26.01 |
| 17 | 26.48 | 26.61 | 26.62 | 26.42 | 26.22 | 26.04 | 27.02 | 26.94 | 26.55 | 26.39 | 26.25 | 26.01 |
| 18 | 26.49 | 26.62 | 26.60 | 26.41 | 26.20 | 26.05 | 27.04 | 26.93 | 26.54 | 26.38 | 26.24 | 26.00 |
| 19 | 26.49 | 26.63 | 26.60 | 26.40 | 26.20 | 26.05 | 27.06 | 26.91 | 26.52 | 26.38 | 26.24 | 25.99 |
| 20 | 26.49 | 26.62 | 26.60 | 26.39 | 26.18 | 26.03 | 27.06 | 26.90 | 26.51 | 26.39 | 26.23 | 25.99 |
| 21 | 26.50 | 26.58 | 26.59 | 26.38 | 26.17 | 26.03 | 27.06 | 26.90 | 26.51 | 26.39 | 26.23 | 25.99 |
| 22 | 26.51 | 26.59 | 26.62 | 26.36 | 26.17 | 26.06 | 27.05 | 26.89 | 26.50 | 26.40 | 26.22 | 26.01 |
| 23 | 26.52 | 26.61 | 26.61 | 26.35 | 26.17 | 26.04 | 27.06 | 26.88 | 26.50 | 26.40 | 26.22 | 26.03 |
| 24 | 26.53 | 26.61 | 26.58 | 26.37 | 26.16 | 26.03 | 27.07 | 26.87 | 26.49 | 26.39 | 26.21 | 26.04 |
| 25 | 26.52 | 26.60 | 26.57 | 26.37 | 26.15 | 26.06 | 27.07 | 26.85 | 26.49 | 26.39 | 26.21 | 26.04 |
| 26 | 26.52 | 26.62 | 26.59 | 26.34 | 26.17 | 26.05 | 27.08 | 26.84 | 26.49 | 26.38 | 26.20 | 26.04 |
| 27 | 26.52 | 26.61 | 26.58 | 26.34 | 26.14 | 26.04 | 27.08 | 26.84 | 26.47 | 26.38 | 26.18 | 26.05 |
| 28 | 26.51 | 26.62 | 26.57 | 26.35 | 26.14 | 26.06 | 27.08 | 26.82 | 26.47 | 26.38 | 26.16 | 26.05 |
| 29 | 26.51 | 26.61 | 26.56 | 26.34 | --- | 26.07 | 27.07 | 26.81 | 26.46 | 26.37 | 26.16 | 26.07 |
| 30 | 26.51 | 26.61 | 26.55 | 26.33 | --- | 26.08 | 27.07 | 26.80 | 26.45 | 26.36 | 26.15 | 26.07 |
| 31 | 26.51 | --- | 26.54 | 26.32 | --- | 26.13 | --- | 26.79 | --- | 26.35 | 26.14 | --- |
| TOTAL | 817.35 | 797.79 | 824.84 | 818.95 | 734.34 | 808.21 | 305.70 | 835.14 | 797.46 | 917.76 | 813.90 | 781.30 |
| MEAN | 26.37 | 26.59 | 26.61 | 26.42 | 26.23 | 26.07 | 26.86 | 26.94 | 26.58 | 26.38 | 26.25 | 26.04 |
| MAX | 26.53 | 26.63 | 26.64 | 26.51 | 26.32 | 26.14 | 27.08 | 27.07 | 26.76 | 26.44 | 26.33 | 26.12 |
| MIN | 25.93 | 26.52 | 26.54 | 26.32 | 26.14 | 26.03 | 26.19 | 26.79 | 26.45 | 26.33 | 26.14 | 25.99 |

CAL YR 1985 TOTAL 9491.09 MEAN 26.00 MAX 26.64 MIN 25.11
WTR YR 1986 TOTAL 9652.74 MEAN 26.45 MAX 27.08 MIN 25.93

## STAGE RECORDS

### 461342091561002 ROUND LAKE NEAR GORDON, WI

LOCATION.--Lat $46^{\circ}13'42''$, long $91^{\circ}56'10''$, in NE 1/4 NE 1/4 NW 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, at north end of lake, 6.5 mi west of Gordon.

DRAINAGE AREA.--0.20 $mi^2$. Area of lake, 0.053 $mi^2$.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 47.67 ft, Sept. 27, 1986; minimum observed gage height, 43.63 ft, July 21-28, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height 47.67 ft, Sept. 27; minimum observed gage height, 46.18 ft, Mar. 30, 31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46.24 | 46.23 | 46.36 | 46.36 | 46.29 | 46.24 | 46.19 | 46.36 | 46.62 | 47.03 | 47.31 | 47.42 |
| 2 | 46.24 | 46.25 | 46.37 | 46.36 | 46.29 | 46.24 | 46.19 | 46.36 | 46.62 | 47.03 | 47.29 | 47.42 |
| 3 | 46.24 | 46.24 | 46.36 | 46.36 | 46.29 | 46.23 | 46.19 | 46.35 | 46.62 | 47.02 | 47.29 | 47.44 |
| 4 | 46.23 | 46.23 | 46.36 | 46.36 | 46.29 | 46.22 | 46.20 | 46.34 | 46.74 | 47.06 | 47.28 | 47.48 |
| 5 | 46.22 | 46.23 | 46.36 | 46.35 | 46.29 | 46.22 | 46.21 | 46.34 | 46.74 | 47.08 | 47.29 | 47.46 |
| 6 | 46.22 | 46.23 | 46.36 | 46.35 | 46.28 | 46.22 | 46.22 | 46.32 | 46.73 | 47.09 | 47.29 | 47.44 |
| 7 | 46.21 | 46.23 | 46.36 | 46.34 | 46.28 | 46.21 | 46.22 | 46.33 | 46.78 | 47.08 | 47.41 | 47.42 |
| 8 | 46.23 | 46.23 | 46.36 | 46.33 | 46.28 | 46.20 | 46.22 | 46.34 | 46.80 | 47.07 | 47.46 | 47.40 |
| 9 | 46.23 | 46.21 | 46.36 | 46.33 | 46.27 | 46.20 | 46.22 | 46.38 | 46.80 | 47.07 | 47.46 | 47.40 |
| 10 | 46.22 | 46.20 | 46.36 | 46.33 | 46.26 | 46.21 | 46.22 | 46.39 | 46.81 | 47.07 | 47.48 | 47.43 |
| 11 | 46.21 | 46.19 | 46.36 | 46.33 | 46.26 | 46.21 | 46.22 | 46.47 | 46.83 | 47.08 | 47.46 | 47.43 |
| 12 | 46.26 | 46.19 | 46.36 | 46.32 | 46.25 | 46.20 | 46.22 | 46.49 | 46.84 | 47.11 | 47.44 | 47.42 |
| 13 | 46.27 | 46.19 | 46.36 | 46.32 | 46.24 | 46.21 | 46.21 | 46.63 | 46.85 | 47.13 | 47.42 | 47.42 |
| 14 | 46.27 | 46.19 | 46.36 | 46.32 | 46.24 | 46.22 | 46.21 | 46.66 | 46.86 | 47.13 | 47.45 | 47.41 |
| 15 | 46.26 | 46.19 | 46.36 | 46.32 | 46.24 | 46.22 | 46.25 | 46.66 | 46.87 | 47.14 | 47.47 | 47.45 |
| 16 | 46.25 | 46.23 | 46.36 | 46.32 | 46.24 | 46.22 | 46.24 | 46.66 | 46.88 | 47.16 | 47.46 | 47.44 |
| 17 | 46.24 | 46.24 | 46.35 | 46.32 | 46.24 | 46.21 | 46.24 | 46.65 | 46.87 | 47.17 | 47.44 | 47.46 |
| 18 | 46.24 | 46.24 | 46.34 | 46.32 | 46.24 | 46.23 | 46.24 | 46.63 | 46.88 | 47.17 | 47.42 | 47.47 |
| 19 | 46.24 | 46.27 | 46.34 | 46.31 | 46.23 | 46.24 | 46.24 | 46.63 | 46.89 | 47.20 | 47.41 | 47.48 |
| 20 | 46.23 | 46.26 | 46.34 | 46.31 | 46.26 | 46.24 | 46.26 | 46.62 | 46.89 | 47.19 | 47.45 | 47.51 |
| 21 | 46.23 | 46.26 | 46.34 | 46.31 | 46.26 | 46.23 | 46.25 | 46.61 | 46.96 | 47.18 | 47.49 | 47.54 |
| 22 | 46.22 | 46.26 | 46.34 | 46.31 | 46.26 | 46.22 | 46.24 | 46.61 | 47.01 | 47.17 | 47.50 | 47.63 |
| 23 | 46.24 | 46.27 | 46.35 | 46.30 | 46.25 | 46.21 | 46.23 | 46.60 | 47.02 | 47.15 | 47.54 | 47.62 |
| 24 | 46.24 | 46.27 | 46.35 | 46.30 | 46.24 | 46.21 | 46.25 | 46.61 | 47.03 | 47.17 | 47.52 | 47.60 |
| 25 | 46.24 | 46.27 | 46.35 | 46.32 | 46.24 | 46.20 | 46.27 | 46.62 | 47.03 | 47.18 | 47.51 | 47.64 |
| 26 | 46.23 | 46.29 | 46.36 | 46.31 | 46.24 | 46.20 | 46.28 | 46.62 | 47.03 | 47.18 | 47.50 | 47.65 |
| 27 | 46.22 | 46.29 | 46.37 | 46.30 | 46.24 | 46.19 | 46.35 | 46.62 | 47.04 | 47.36 | 47.47 | 47.67 |
| 28 | 46.22 | 46.29 | 46.37 | 46.30 | 46.24 | 46.19 | 46.38 | 46.62 | 47.04 | 47.38 | 47.45 | 47.66 |
| 29 | 46.22 | 46.30 | 46.36 | 46.30 | --- | 46.19 | 46.39 | 46.62 | 47.04 | 47.36 | 47.44 | 47.66 |
| 30 | 46.22 | 46.31 | 46.36 | 46.30 | --- | 46.18 | 46.38 | 46.63 | 47.03 | 47.35 | 47.43 | 47.64 |
| 31 | 46.22 | --- | 46.36 | 46.29 | --- | 46.18 | --- | 46.63 | --- | 47.33 | 47.42 | --- |
| MEAN | 46.23 | 46.24 | 46.36 | 46.32 | 46.26 | 46.21 | 46.25 | 46.53 | 46.87 | 47.16 | 47.43 | 47.50 |
| MAX | 46.27 | 46.31 | 46.37 | 46.36 | 46.29 | 46.24 | 46.39 | 46.65 | 47.04 | 47.38 | 47.54 | 47.67 |
| MIN | 46.21 | 46.19 | 46.34 | 46.29 | 46.23 | 46.18 | 46.19 | 46.32 | 46.62 | 47.02 | 47.28 | 47.40 |

CAL YR 1985 MEAN 46.10 MAX 46.37 MIN 45.87
WTR YR 1986 MEAN 46.62 MAX 47.67 MIN 46.18

## PRECIPITATION QUANTITY

### 461342091561003 ROUND LAKE RAIN GAGE NEAR GORDON, WI

LOCATION.--Lat 46°13'42", long 91°56'10", in NE 1/4 NE 1/4 NW 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, at north end of lake, 6.5 mi west of Gordon.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.76 in., July 27, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.76 in., July 27.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .08 | .24 | | | | | --- | .00 | .00 | .00 | .02 | .05 |
| 2 | .00 | .00 | | | | | --- | .00 | .00 | .00 | .01 | .00 |
| 3 | .01 | .00 | | | | | --- | .00 | 1.09 | .00 | .00 | .84 |
| 4 | .01 | .00 | | | | | --- | .00 | .27 | .63 | .32 | .04 |
| 5 | .00 | .00 | | | | | --- | .00 | .00 | .12 | .00 | .00 |
| 6 | .00 | .07 | | | | | --- | .00 | .00 | .00 | .07 | .00 |
| 7 | .28 | .00 | | | | | --- | .00 | .56 | .00 | .28 | .00 |
| 8 | .08 | .00 | | | | | --- | .79 | .00 | .00 | .00 | .00 |
| 9 | .00 | .00 | | | | | --- | .00 | .00 | .00 | .76 | .47 |
| 10 | .01 | .00 | | | | | --- | .28 | .24 | .00 | .00 | .14 |
| 11 | .00 | .00 | | | | | --- | .97 | .29 | .57 | .00 | .00 |
| 12 | .71 | --- | | | | | --- | .66 | .00 | .50 | .00 | .17 |
| 13 | .00 | --- | | | | | --- | 1.40 | .00 | .01 | .13 | .00 |
| 14 | .00 | --- | | | | | --- | .00 | .00 | .00 | .65 | .40 |
| 15 | .00 | --- | | | | | .01 | .15 | .00 | .43 | .00 | .22 |
| 16 | .00 | --- | | | | | .00 | .00 | .00 | .00 | .00 | .00 |
| 17 | .00 | --- | | | | | .00 | .00 | .00 | .00 | .00 | .07 |
| 18 | .00 | --- | | | | | .24 | .00 | .00 | .00 | .00 | .00 |
| 19 | .00 | --- | | | | | .03 | .00 | .01 | .38 | .00 | .00 |
| 20 | .00 | --- | | | | | .00 | .00 | .43 | .00 | 1.05 | .00 |
| 21 | .00 | --- | | | | | .00 | .00 | 1.08 | .00 | .00 | .00 |
| 22 | .00 | --- | | | | | .00 | .00 | .01 | .00 | .98 | .00 |
| 23 | .04 | --- | | | | | .00 | .00 | .28 | .00 | .00 | .00 |
| 24 | .00 | --- | | | | | .44 | .00 | .00 | .45 | .00 | .00 |
| 25 | .00 | --- | | | | | .07 | .03 | .00 | .00 | .00 | .00 |
| 26 | .00 | --- | | | | | .21 | .00 | .25 | .00 | .03 | .00 |
| 27 | .00 | --- | | | | | .77 | .00 | .00 | 2.76 | .00 | .00 |
| 28 | .00 | --- | | | | | .37 | .00 | .00 | .00 | .00 | .00 |
| 29 | .11 | --- | | | | | .00 | .00 | .00 | .00 | .00 | .00 |
| 30 | .00 | --- | | | | | .02 | .00 | .00 | .00 | .01 | .00 |
| 31 | .00 | --- | | | | | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 1.33 | 0.31 | | | | | 2.16 | 4.28 | 4.51 | 5.85 | 4.31 | 2.40 |

## PRECIPITATION QUANTITY

### 461423091560303 ROUND LAKE RAIN GAGE AT WELL 51R NEAR GORDON, WI

LOCATION.--Lat 46°14'23", long 91°56'03", in NW 1/4 SW 1/4 NE 1/4 sec.1, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.80 mi north of lake, 6.5 mi west of Gordon.

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.61 in., Oct. 12, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 2.61 in., Oct. 12.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .63 | | | | | | | --- | .00 | .00 | .03 | .03 |
| 2 | .09 | | | | | | | --- | .00 | .00 | .03 | .00 |
| 3 | .18 | | | | | | | --- | 1.23 | .00 | .00 | .96 |
| 4 | .18 | | | | | | | --- | .30 | .66 | .06 | .03 |
| 5 | .00 | | | | | | | --- | .00 | .15 | .00 | .39 |
| 6 | .00 | | | | | | | --- | .00 | .00 | .06 | .06 |
| 7 | 1.17 | | | | | | | --- | .69 | .00 | .00 | .00 |
| 8 | .27 | | | | | | | --- | .00 | .00 | .00 | .00 |
| 9 | .00 | | | | | | | .00 | .00 | .00 | .00 | .54 |
| 10 | .00 | | | | | | | .39 | .33 | .00 | .00 | .09 |
| 11 | .00 | | | | | | | .99 | .36 | .75 | .00 | .69 |
| 12 | 2.61 | | | | | | | .75 | .00 | .57 | .00 | .72 |
| 13 | .00 | | | | | | | 1.50 | .00 | .00 | .18 | .00 |
| 14 | .09 | | | | | | | .00 | .00 | .00 | .66 | .48 |
| 15 | .00 | | | | | | | .09 | .03 | .51 | .00 | .30 |
| 16 | .00 | | | | | | | .00 | .00 | .00 | .00 | .00 |
| 17 | .00 | | | | | | | .00 | .00 | .00 | .00 | .57 |
| 18 | .00 | | | | | | | .00 | .00 | .03 | .00 | .06 |
| 19 | .00 | | | | | | | .00 | .03 | .45 | .00 | .87 |
| 20 | .00 | | | | | | | .00 | .36 | .03 | 1.29 | .00 |
| 21 | .00 | | | | | | | .00 | 1.17 | .03 | .03 | 1.38 |
| 22 | .00 | | | | | | | .15 | .03 | .00 | 1.05 | .03 |
| 23 | .90 | | | | | | | .00 | .21 | .00 | .00 | .00 |
| 24 | .00 | | | | | | | .03 | .00 | .51 | .00 | .21 |
| 25 | .00 | | | | | | | .03 | .00 | .00 | .00 | .54 |
| 26 | .00 | | | | | | | .00 | .30 | .00 | .06 | .36 |
| 27 | .00 | | | | | | | .00 | .00 | 2.28 | .00 | .03 |
| 28 | .00 | | | | | | | .00 | .00 | .00 | .00 | .09 |
| 29 | .63 | | | | | | | .00 | .00 | .00 | .00 | .00 |
| 30 | .00 | | | | | | | .00 | .00 | .00 | .00 | .00 |
| 31 | --- | | | | | | | .00 | --- | .03 | .00 | --- |
| TOTAL | 6.75 | | | | | | | 3.93 | 5.04 | 6.00 | 3.45 | 8.43 |

## PRECIPITATION QUANTITY

### 461323091555003 ROUND LAKE RAIN GAGE AT WELL 55R NEAR GORDON, WI

LOCATION.--Lat 46°13'23", long 91°55'50", in SE 1/4 SW 1/4 NE 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.25 mi southeast of lake, 6.5 mi west of Gordon.

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.76 in., July 27, 1986.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 2.76 in., July 27.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .45 | .81 | | | | | | --- | .00 | .03 | .06 | .06 |
| 2 | .18 | .00 | | | | | | --- | .00 | .03 | .03 | .00 |
| 3 | .09 | .00 | | | | | | --- | 1.02 | .00 | .00 | .87 |
| 4 | .09 | .00 | | | | | | --- | .27 | .51 | .39 | .09 |
| 5 | .00 | .00 | | | | | | --- | .00 | .18 | .00 | .00 |
| 6 | .00 | .45 | | | | | | --- | .00 | .00 | .00 | .00 |
| 7 | 1.53 | .00 | | | | | | --- | .54 | .00 | .72 | .00 |
| 8 | .00 | .00 | | | | | | --- | .00 | .03 | .00 | .00 |
| 9 | .09 | .09 | | | | | | .00 | .00 | .00 | .66 | .42 |
| 10 | .18 | .09 | | | | | | .30 | .36 | .00 | .03 | .15 |
| 11 | .09 | .09 | | | | | | .93 | .27 | .57 | .00 | .03 |
| 12 | 2.43 | --- | | | | | | .63 | .03 | .42 | .00 | .21 |
| 13 | .00 | --- | | | | | | 1.50 | .00 | .00 | .18 | .00 |
| 14 | .00 | --- | | | | | | .03 | .00 | .03 | .78 | .42 |
| 15 | .00 | --- | | | | | | .15 | .00 | .48 | .03 | .33 |
| 16 | .00 | --- | | | | | | .00 | .00 | .00 | .03 | .00 |
| 17 | .00 | --- | | | | | | .00 | .00 | .00 | .00 | .45 |
| 18 | .00 | --- | | | | | | .00 | .00 | .00 | .00 | .03 |
| 19 | .09 | --- | | | | | | .00 | .00 | .42 | .00 | .93 |
| 20 | .00 | --- | | | | | | .00 | .30 | .03 | 1.14 | .03 |
| 21 | .00 | --- | | | | | | .00 | .99 | .00 | .00 | 1.38 |
| 22 | .00 | --- | | | | | | .00 | .03 | .00 | .99 | .00 |
| 23 | .72 | --- | | | | | | .00 | .30 | .00 | .00 | .00 |
| 24 | .00 | --- | | | | | | .00 | .00 | .66 | .00 | .15 |
| 25 | .00 | --- | | | | | | .06 | .00 | .00 | .00 | .42 |
| 26 | .09 | --- | | | | | | .00 | .12 | .03 | .03 | .33 |
| 27 | .00 | --- | | | | | | .00 | .00 | 2.76 | .00 | .03 |
| 28 | .00 | --- | | | | | | .00 | .00 | .00 | .00 | .06 |
| 29 | .45 | --- | | | | | | .00 | .00 | .00 | .00 | .00 |
| 30 | .09 | --- | | | | | | .00 | .00 | .00 | .09 | .00 |
| 31 | .00 | --- | | | | | | .00 | --- | .00 | .00 | --- |
| TOTAL | 6.57 | 1.53 | | | | | | 3.60 | 4.23 | 6.18 | 5.16 | 6.39 |

## 461423091560301 WELL DS-43/13W/01-0331

LOCATION.--Lat 46°14'23", long 91°56'03", in NW 1/4 SW 1/4 NE 1/4 sec.01, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.80 mi north of Round Lake, about 6.5 mi west of Gordon.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 48 ft, cased to 45 ft, screened 45-48 ft.

PERIOD OF RECORD.--November 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 57.89 ft, July 27, 1986; mininum observed water level, 55.51 ft, Apr. 17, 22, 1986.

EXTREMES FOR CURRENT PERIOD.--Maximum observed water level, 57.89 ft, July 27; minimum observed water level, 55.51 ft, Apr. 17, 22.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 56.06 | 56.13 | 56.31 | 56.31 | 56.07 | 55.86 | 55.61 | 55.59 | 56.52 | 57.67 | 57.88 | 57.67 |
| 2 | 56.05 | 56.13 | 56.30 | 56.30 | 56.06 | 55.87 | 55.59 | 55.56 | 56.56 | 57.69 | 57.87 | 57.66 |
| 3 | 56.06 | 56.11 | 56.27 | 56.29 | 56.05 | 55.84 | 55.58 | 55.56 | 56.62 | 57.70 | 57.85 | 57.67 |
| 4 | 56.08 | 56.09 | 56.30 | 56.28 | 56.06 | 55.83 | 55.58 | 55.63 | 56.68 | 57.73 | 57.85 | 57.69 |
| 5 | 56.06 | 56.11 | 56.31 | 56.29 | 56.05 | 55.84 | 55.59 | 55.69 | 56.72 | 57.75 | 57.85 | 57.66 |
| 6 | 56.04 | 56.16 | 56.31 | 56.27 | 56.02 | 55.82 | 55.59 | 55.71 | 56.78 | 57.74 | 57.85 | 57.63 |
| 7 | 56.03 | 56.17 | 56.33 | 56.20 | 56.03 | 55.79 | 55.58 | 55.68 | 56.85 | 57.73 | 57.86 | 57.62 |
| 8 | 56.06 | 56.16 | 56.34 | 56.20 | 56.02 | 55.81 | 55.57 | 55.67 | 56.89 | 57.75 | 57.87 | 57.62 |
| 9 | 56.00 | 56.14 | 56.32 | 56.28 | 56.00 | 55.84 | 55.56 | 55.68 | 56.92 | 57.77 | 57.86 | 57.63 |
| 10 | 55.98 | 56.13 | 56.32 | 56.26 | 55.99 | 55.84 | 55.55 | 55.69 | 56.97 | 57.79 | 57.85 | 57.67 |
| 11 | 55.99 | 56.12 | 56.31 | 56.28 | 55.98 | 55.79 | 55.56 | 55.71 | 57.04 | 57.81 | 57.81 | 57.68 |
| 12 | 56.03 | 56.16 | 56.34 | 56.29 | 55.98 | 55.77 | 55.56 | 55.74 | 57.07 | 57.83 | 57.79 | 57.65 |
| 13 | 56.03 | 56.18 | 56.34 | 56.23 | 55.98 | 55.78 | 55.55 | 55.77 | 57.10 | 57.83 | 57.80 | 57.60 |
| 14 | 56.03 | 56.19 | 56.35 | 56.23 | 55.99 | 55.78 | 55.56 | 55.79 | 57.13 | 57.81 | 57.82 | 57.58 |
| 15 | 56.04 | 56.17 | 56.36 | 56.21 | 55.98 | 55.76 | 55.55 | 55.81 | 57.19 | 57.82 | 57.82 | 57.59 |
| 16 | 56.01 | 56.22 | 56.34 | 56.23 | 55.97 | 55.75 | 55.52 | 55.82 | 57.24 | 57.84 | 57.82 | 57.57 |
| 17 | 56.02 | 56.24 | 56.34 | 56.24 | 55.98 | 55.74 | 55.51 | 55.83 | 57.25 | 57.85 | 57.77 | 57.61 |
| 18 | 56.02 | 56.24 | 56.31 | 56.22 | 55.97 | 55.75 | 55.53 | 55.85 | 57.30 | 57.86 | 57.73 | 57.63 |
| 19 | 55.99 | 56.26 | 56.31 | 56.19 | 55.95 | 55.75 | 55.56 | 55.86 | 57.35 | 57.86 | 57.72 | 57.62 |
| 20 | 55.98 | 56.24 | 56.31 | 56.18 | 55.93 | 55.69 | 55.56 | 55.89 | 57.38 | 57.85 | 57.73 | 57.62 |
| 21 | 56.00 | 56.20 | 56.33 | 56.19 | 55.90 | 55.68 | 55.53 | 55.92 | 57.42 | 57.85 | 57.70 | 57.61 |
| 22 | 56.03 | 56.22 | 56.38 | 56.15 | 55.92 | 55.72 | 55.51 | 55.97 | 57.46 | 57.86 | 57.71 | 57.64 |
| 23 | 56.07 | 56.25 | 56.39 | 56.11 | 55.91 | 55.70 | 55.53 | 56.02 | 57.48 | 57.86 | 57.73 | 57.66 |
| 24 | 56.08 | 56.25 | 56.34 | 56.14 | 55.89 | 55.66 | 55.55 | 56.07 | 57.50 | 57.88 | 57.71 | 57.67 |
| 25 | 56.04 | 56.25 | 56.31 | 56.18 | 55.90 | 55.71 | 55.54 | 56.12 | 57.53 | 57.88 | 57.72 | 57.68 |
| 26 | 56.06 | 56.29 | 56.37 | 56.13 | 55.93 | 55.69 | 55.55 | 56.17 | 57.57 | 57.87 | 57.71 | 57.67 |
| 27 | 56.04 | 56.27 | 56.35 | 56.10 | 55.89 | 55.64 | 55.56 | 56.23 | 57.59 | 57.89 | 57.68 | 57.66 |
| 28 | 56.03 | 56.28 | 56.33 | 56.14 | 55.85 | 55.66 | 55.60 | 56.29 | 57.61 | 57.88 | 57.66 | 57.64 |
| 29 | 56.05 | 56.27 | 56.34 | 56.13 | --- | 55.66 | 55.59 | 56.34 | 57.63 | 57.87 | 57.66 | 57.65 |
| 30 | 56.05 | 56.27 | 56.35 | 56.08 | --- | 55.64 | 55.59 | 56.41 | 57.65 | 57.88 | 57.67 | 57.65 |
| 31 | 56.09 | --- | 56.34 | 56.06 | --- | 55.63 | --- | 56.47 | --- | 57.88 | 57.67 | --- |
| **MEAN** | 56.04 | 56.20 | 56.33 | 56.21 | 55.97 | 55.75 | 55.56 | 55.89 | 57.17 | 57.82 | 57.77 | 57.64 |
| **MAX** | 56.09 | 56.29 | 56.39 | 56.31 | 56.07 | 55.87 | 55.61 | 56.47 | 57.65 | 57.89 | 57.88 | 57.69 |
| **MIN** | 55.98 | 56.09 | 56.27 | 56.06 | 55.85 | 55.63 | 55.51 | 55.56 | 56.52 | 57.67 | 57.66 | 57.57 |

CAL YR 1985 MEAN 56.03 MAX 56.42 MIN 55.57
WTR YR 1986 MEAN 56.53 MAX 57.89 MIN 55.51

## GROUND-WATER LEVELS

### 461342091561501 WELL DS-43/13W/12-0332

LOCATION.--Lat 46°13'42", long 91°56'15", in NW 1/4 NE 1/4 NW 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 100 ft northwest of Round Lake, about 6.5 mi west of Gordon.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 39 ft, cased to 36 ft, screened 36-39 ft.

PERIOD OF RECORD.--November 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS -- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 47.72 ft Sept. 29, 30, 1986; minimum observed water level, 45.91 ft, June 24, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum observed water level, 47.72 ft, Sept. 29, 30; minimum observed water level, 46.18 ft, Mar. 30.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46.24 | 46.31 | 46.42 | 46.43 | 46.34 | 46.27 | 46.19 | 46.36 | 46.88 | 47.28 | 47.42 | 47.46 |
| 2 | 46.25 | 46.30 | 46.40 | 46.43 | 46.33 | 46.26 | 46.21 | 46.34 | 46.89 | 47.27 | 47.41 | 47.46 |
| 3 | 46.25 | 46.29 | 46.42 | 46.41 | 46.33 | 46.24 | 46.22 | 46.36 | 46.92 | 47.27 | 47.40 | 47.46 |
| 4 | 46.26 | 46.29 | 46.44 | 46.42 | 46.34 | 46.25 | 46.23 | 46.40 | 46.94 | 47.28 | 47.39 | 47.46 |
| 5 | 46.24 | 46.31 | 46.44 | 46.44 | 46.32 | 46.25 | 46.25 | 46.41 | 46.98 | 47.28 | 47.40 | 47.51 |
| 6 | 46.24 | 46.31 | 46.44 | 46.39 | 46.32 | 46.23 | 46.25 | 46.38 | 47.00 | 47.27 | 47.40 | 47.54 |
| 7 | 46.24 | 46.31 | 46.46 | 46.37 | 46.32 | 46.21 | 46.26 | 46.34 | 47.03 | 47.27 | 47.42 | 47.53 |
| 8 | 46.25 | 46.30 | 46.44 | 46.42 | 46.31 | 46.26 | 46.24 | 46.35 | 47.04 | 47.26 | 47.45 | 47.54 |
| 9 | 46.22 | 46.30 | 46.43 | 46.44 | 46.31 | 46.25 | 46.24 | 46.39 | 47.06 | 47.26 | 47.45 | 47.53 |
| 10 | 46.23 | 46.28 | 46.43 | 46.40 | 46.30 | 46.24 | 46.25 | 46.41 | 47.08 | 47.27 | 47.46 | 47.56 |
| 11 | 46.24 | 46.29 | 46.44 | 46.44 | 46.30 | 46.21 | 46.27 | 46.45 | 47.10 | 47.27 | 47.46 | 47.56 |
| 12 | 46.27 | 46.31 | 46.45 | 46.40 | 46.30 | 46.21 | 46.25 | 46.49 | 47.11 | 47.28 | 47.46 | 47.53 |
| 13 | 46.27 | 46.30 | 46.43 | 46.39 | 46.31 | 46.24 | 46.25 | 46.53 | 47.12 | 47.29 | 47.46 | 47.51 |
| 14 | 46.28 | 46.30 | 46.46 | 46.37 | 46.30 | 46.24 | 46.26 | 46.58 | 47.13 | 47.28 | 47.46 | 47.50 |
| 15 | 46.28 | 46.29 | 46.43 | 46.39 | 46.29 | 46.22 | 46.25 | 46.61 | 47.16 | 47.29 | 47.46 | 47.53 |
| 16 | 46.27 | 46.33 | 46.43 | 46.40 | 46.30 | 46.21 | 46.24 | 46.63 | 47.14 | 47.31 | 47.46 | 47.53 |
| 17 | 46.28 | 46.33 | 46.43 | 46.39 | 46.30 | 46.21 | 46.26 | 46.64 | 47.15 | 47.31 | 47.46 | 47.57 |
| 18 | 46.26 | 46.34 | 46.41 | 46.37 | 46.29 | 46.25 | 46.28 | 46.66 | 47.17 | 47.31 | 47.46 | 47.57 |
| 19 | 46.26 | 46.35 | 46.42 | 46.36 | 46.27 | 46.22 | 46.30 | 46.67 | 47.17 | 47.32 | 47.46 | 47.57 |
| 20 | 46.26 | 46.33 | 46.42 | 46.37 | 46.26 | 46.19 | 46.29 | 46.68 | 47.17 | 47.32 | 47.46 | 47.59 |
| 21 | 46.27 | 46.32 | 46.46 | 46.37 | 46.27 | 46.23 | 46.27 | 46.70 | 47.19 | 47.32 | 47.46 | 47.61 |
| 22 | 46.29 | 46.35 | 46.47 | 46.33 | 46.29 | 46.25 | 46.27 | 46.72 | 47.21 | 47.31 | 47.46 | 47.64 |
| 23 | 46.30 | 46.35 | 46.45 | 46.34 | 46.27 | 46.19 | 46.29 | 46.73 | 47.23 | 47.31 | 47.46 | 47.67 |
| 24 | 46.29 | 46.33 | 46.41 | 46.38 | 46.27 | 46.21 | 46.28 | 46.75 | 47.24 | 47.32 | 47.46 | 47.68 |
| 25 | 46.28 | 46.35 | 46.43 | 46.37 | 46.28 | 46.24 | 46.30 | 46.77 | 47.26 | 47.32 | 47.46 | 47.69 |
| 26 | 46.29 | 46.38 | 46.49 | 46.33 | 46.30 | 46.19 | 46.30 | 46.79 | 47.26 | 47.31 | 47.46 | 47.69 |
| 27 | 46.26 | 46.36 | 46.43 | 46.36 | 46.24 | 46.19 | 46.33 | 46.81 | 47.26 | 47.35 | 47.46 | 47.71 |
| 28 | 46.27 | 46.38 | 46.45 | 46.38 | 46.26 | 46.22 | 46.36 | 46.83 | 47.27 | 47.38 | 47.46 | 47.71 |
| 29 | 46.27 | 46.37 | 46.44 | 46.34 | --- | 46.22 | 46.35 | 46.85 | 47.27 | 47.40 | 47.46 | 47.72 |
| 30 | 46.29 | 46.39 | 46.47 | 46.33 | --- | 46.18 | 46.38 | 46.87 | 47.27 | 47.41 | 47.46 | 47.72 |
| 31 | 46.31 | --- | 46.43 | 46.33 | --- | 46.22 | --- | 46.88 | --- | 47.42 | 47.46 | --- |
| MEAN | 46.26 | 46.33 | 46.44 | 46.38 | 46.30 | 46.23 | 46.27 | 46.59 | 47.12 | 47.31 | 47.45 | 47.58 |
| MAX | 46.31 | 46.39 | 46.49 | 46.44 | 46.34 | 46.27 | 46.38 | 46.88 | 47.27 | 47.42 | 47.46 | 47.72 |
| MIN | 46.22 | 46.28 | 46.40 | 46.33 | 46.24 | 46.18 | 46.19 | 46.34 | 46.88 | 47.26 | 47.39 | 47.46 |

CAL YR 1985 MEAN 46.13 MAX 46.49 MIN 45.91
WTR YR 1986 MEAN 46.69 MAX 47.72 MIN 46.18

## GROUND-WATER LEVELS

### 461342091554201 WELL DS-43/13W/12-0367

LOCATION.--Lat 46°13'42", long 91°55'42", in NW 1/4 NE 1/4 NE 1/4, sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.25 mi northeast of Round Lake, about 6.5 mi west of Gordon.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 53 ft, cased to 50 ft, well screened 50-53 ft.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 47.33 ft, Sept. 29, 30, 1986; minimum observed water level, 43.08 ft, July 21, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 47.33 ft, Sept. 29, 30; minimum observed water level, 45.68 ft, Mar. 27.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 45.74 | 45.80 | 45.87 | 45.87 | 45.83 | 45.76 | 45.72 | 45.86 | 46.27 | 46.66 | 46.93 | 47.12 |
| 2 | 45.75 | 45.79 | 45.87 | 45.87 | 45.82 | 45.76 | 45.71 | 45.85 | 46.28 | 46.66 | 46.94 | 47.11 |
| 3 | 45.76 | 45.78 | 45.87 | 45.87 | 45.82 | 45.73 | 45.72 | 45.85 | 46.29 | 46.66 | 46.93 | 47.13 |
| 4 | 45.77 | 45.78 | 45.88 | 45.87 | 45.83 | 45.73 | 45.73 | 45.88 | 46.32 | 46.68 | 46.93 | 47.15 |
| 5 | 45.75 | 45.79 | 45.89 | 45.89 | 45.82 | 45.74 | 45.76 | 45.89 | 46.35 | 46.69 | 46.94 | 47.13 |
| 6 | 45.75 | 45.80 | 45.89 | 45.86 | 45.81 | 45.72 | 45.76 | 45.88 | 46.37 | 46.69 | 46.94 | 47.12 |
| 7 | 45.76 | 45.80 | 45.90 | 45.84 | 45.82 | 45.70 | 45.77 | 45.84 | 46.40 | 46.69 | 46.96 | 47.12 |
| 8 | 45.76 | 45.78 | 45.90 | 45.86 | 45.81 | 45.74 | 45.77 | 45.84 | 46.41 | 46.70 | 47.01 | 47.12 |
| 9 | 45.73 | 45.77 | 45.90 | 45.89 | 45.81 | 45.74 | 45.76 | 45.87 | 46.42 | 46.70 | 47.02 | 47.12 |
| 10 | 45.74 | 45.76 | 45.90 | 45.85 | 45.80 | 45.73 | 45.76 | 45.89 | 46.44 | 46.71 | 47.04 | 47.14 |
| 11 | 45.75 | 45.76 | 45.90 | 45.87 | 45.80 | 45.70 | 45.77 | 45.92 | 46.46 | 46.72 | 47.04 | 47.14 |
| 12 | 45.78 | 45.77 | 45.91 | 45.85 | 45.80 | 45.70 | 45.77 | 45.95 | 46.46 | 46.74 | 47.04 | 47.12 |
| 13 | 45.79 | 45.78 | 45.90 | 45.84 | 45.81 | 45.71 | 45.76 | 45.99 | 46.47 | 46.75 | 47.05 | 47.10 |
| 14 | 45.79 | 45.77 | 45.91 | 45.84 | 45.81 | 45.72 | 45.77 | 46.04 | 46.48 | 46.75 | 47.06 | 47.10 |
| 15 | 45.79 | 45.76 | 45.90 | 45.84 | 45.80 | 45.71 | 45.77 | 46.07 | 46.50 | 46.76 | 47.07 | 47.13 |
| 16 | 45.77 | 45.80 | 45.90 | 45.86 | 45.80 | 45.70 | 45.76 | 46.09 | 46.50 | 46.78 | 47.08 | 47.13 |
| 17 | 45.79 | 45.81 | 45.89 | 45.86 | 45.80 | 45.70 | 45.76 | 46.11 | 46.51 | 46.79 | 47.07 | 47.15 |
| 18 | 45.77 | 45.81 | 45.88 | 45.84 | 45.79 | 45.73 | 45.77 | 46.12 | 46.53 | 46.79 | 47.06 | 47.16 |
| 19 | 45.75 | 45.82 | 45.88 | 45.84 | 45.77 | 45.71 | 45.80 | 46.13 | 46.54 | 46.80 | 47.06 | 47.16 |
| 20 | 45.75 | 45.81 | 45.88 | 45.84 | 45.75 | 45.69 | 45.80 | 46.14 | 46.54 | 46.80 | 47.07 | 47.18 |
| 21 | 45.77 | 45.80 | 45.89 | 45.84 | 45.76 | 45.70 | 45.79 | 46.15 | 46.57 | 46.80 | 47.08 | 47.20 |
| 22 | 45.78 | 45.82 | 45.92 | 45.81 | 45.78 | 45.73 | 45.78 | 46.16 | 46.58 | 46.81 | 47.11 | 47.24 |
| 23 | 45.80 | 45.83 | 45.90 | 45.81 | 45.77 | 45.69 | 45.79 | 46.17 | 46.59 | 46.81 | 47.13 | 47.26 |
| 24 | 45.79 | 45.83 | 45.88 | 45.85 | 45.77 | 45.69 | 45.78 | 46.17 | 46.60 | 46.82 | 47.13 | 47.26 |
| 25 | 45.78 | 45.83 | 45.89 | 45.86 | 45.77 | 45.73 | 45.80 | 46.18 | 46.62 | 46.82 | 47.15 | 47.29 |
| 26 | 45.79 | 45.85 | 45.92 | 45.83 | 45.79 | 45.69 | 45.81 | 46.20 | 46.63 | 46.82 | 47.14 | 47.30 |
| 27 | 45.74 | 45.84 | 45.90 | 45.83 | 45.75 | 45.68 | 45.82 | 46.21 | 46.64 | 46.87 | 47.13 | 47.31 |
| 28 | 45.76 | 45.85 | 45.89 | 45.86 | 45.72 | 45.71 | 45.85 | 46.22 | 46.64 | 46.91 | 47.13 | 47.32 |
| 29 | 45.77 | 45.85 | 45.89 | 45.83 | --- | 45.71 | 45.86 | 46.23 | 46.65 | 46.92 | 47.13 | 47.33 |
| 30 | 45.77 | 45.85 | 45.91 | 45.82 | --- | 45.70 | 45.87 | 46.26 | 46.65 | 46.93 | 47.12 | 47.33 |
| 31 | 45.79 | --- | 45.88 | 45.82 | --- | 45.72 | --- | 46.27 | --- | 46.93 | 47.12 | --- |
| MEAN | 45.77 | 45.80 | 45.89 | 45.85 | 45.79 | 45.72 | 45.78 | 46.05 | 46.49 | 46.77 | 47.05 | 47.18 |
| MAX | 45.80 | 45.85 | 45.92 | 45.89 | 45.83 | 45.76 | 45.87 | 46.27 | 46.65 | 46.93 | 47.15 | 47.33 |
| MIN | 45.73 | 45.76 | 45.87 | 45.81 | 45.72 | 45.68 | 45.71 | 45.84 | 46.27 | 46.66 | 46.93 | 47.10 |

CAL YR 1985 MEAN 45.64 MAX 45.92 MIN 45.39
WTR YR 1986 MEAN 46.18 MAX 47.33 MIN 45.68

## GROUND-WATER LEVELS

### 461323091555001 WELL DS-43/13W/12-0393

LOCATION.--Lat 46°13'23", long 91°55'50", in SE 1/4 SW 1/4 NE 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.25 mi southeast of Round Lake, about 6.5 mi west of Gordon.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 48 ft, cased to 45 ft, screened 45-48 ft.

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 48.70 ft, Sept. 30, 1986; minimum observed water level, 46.74 ft, Apr. 1, 1986

EXTREMES FOR CURRENT PERIOD.--Maximum observed water level, 48.70 ft, Sept. 30; minimum observed water level, 46.74 ft, Apr. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 47.08 | 47.21 | 47.32 | 47.23 | 46.99 | 46.89 | 46.74 | 47.24 | 48.21 | 48.64 | 48.44 | 48.51 |
| 2 | 47.09 | 47.21 | 47.29 | 47.22 | 46.98 | 46.89 | 46.76 | 47.22 | 48.25 | 48.64 | 48.42 | 48.52 |
| 3 | 47.10 | 47.21 | 47.28 | 47.20 | 46.97 | 46.86 | 46.78 | 47.25 | 48.31 | 48.64 | 48.40 | 48.55 |
| 4 | 47.12 | 47.21 | 47.31 | 47.20 | 46.99 | 46.86 | 46.80 | 47.29 | 48.35 | 48.66 | 48.41 | 48.56 |
| 5 | 47.10 | 47.23 | 47.31 | 47.21 | 46.97 | 46.87 | 46.85 | 47.32 | 48.38 | 48.65 | 48.42 | 48.54 |
| 6 | 47.10 | 47.24 | 47.31 | 47.15 | 46.96 | 46.85 | 46.87 | 47.31 | 48.40 | 48.60 | 48.42 | 48.53 |
| 7 | 47.09 | 47.24 | 47.34 | 47.09 | 46.96 | 46.83 | 46.89 | 47.29 | 48.42 | 48.58 | 48.44 | 48.54 |
| 8 | 47.07 | 47.23 | 47.33 | 47.14 | 46.95 | 46.88 | 46.88 | 47.30 | 48.43 | 48.60 | 48.43 | 48.56 |
| 9 | 47.00 | 47.22 | 47.31 | 47.21 | 46.95 | 46.89 | 46.90 | 47.31 | 48.46 | 48.60 | 48.42 | 48.58 |
| 10 | 47.02 | 47.21 | 47.30 | 47.16 | 46.94 | 46.87 | 46.93 | 47.31 | 48.49 | 48.61 | 48.41 | 48.61 |
| 11 | 47.05 | 47.22 | 47.31 | 47.21 | 46.94 | 46.82 | 46.96 | 47.33 | 48.51 | 48.63 | 48.39 | 48.61 |
| 12 | 47.09 | 47.25 | 47.33 | 47.16 | 46.94 | 46.81 | 46.97 | 47.34 | 48.53 | 48.63 | 48.39 | 48.57 |
| 13 | 47.08 | 47.26 | 47.32 | 47.13 | 46.95 | 46.83 | 46.98 | 47.35 | 48.53 | 48.58 | 48.42 | 48.54 |
| 14 | 47.09 | 47.26 | 47.34 | 47.12 | 46.94 | 46.82 | 47.00 | 47.36 | 48.54 | 48.54 | 48.46 | 48.54 |
| 15 | 47.10 | 47.25 | 47.32 | 47.13 | 46.94 | 46.80 | 47.00 | 47.38 | 48.57 | 48.55 | 48.45 | 48.56 |
| 16 | 47.08 | 47.28 | 47.31 | 47.16 | 46.94 | 46.79 | 47.00 | 47.39 | 48.56 | 48.56 | 48.44 | 48.55 |
| 17 | 47.11 | 47.28 | 47.30 | 47.15 | 46.95 | 46.79 | 47.02 | 47.41 | 48.55 | 48.55 | 48.39 | 48.60 |
| 18 | 47.10 | 47.29 | 47.28 | 47.11 | 46.94 | 46.83 | 47.05 | 47.43 | 48.59 | 48.53 | 48.38 | 48.60 |
| 19 | 47.09 | 47.29 | 47.27 | 47.09 | 46.93 | 46.79 | 47.09 | 47.46 | 48.60 | 48.52 | 48.40 | 48.60 |
| 20 | 47.10 | 47.27 | 47.27 | 47.09 | 46.91 | 46.77 | 47.11 | 47.50 | 48.60 | 48.50 | 48.42 | 48.59 |
| 21 | 47.12 | 47.24 | 47.30 | 47.10 | 46.90 | 46.78 | 47.11 | 47.55 | 48.62 | 48.48 | 48.38 | 48.61 |
| 22 | 47.14 | 47.29 | 47.34 | 47.02 | 46.92 | 46.81 | 47.12 | 47.61 | 48.62 | 48.47 | 48.44 | 48.63 |
| 23 | 47.16 | 47.29 | 47.32 | 47.01 | 46.90 | 46.77 | 47.16 | 47.67 | 48.63 | 48.47 | 48.44 | 48.65 |
| 24 | 47.15 | 47.27 | 47.27 | 47.09 | 46.89 | 46.77 | 47.17 | 47.73 | 48.61 | 48.48 | 48.44 | 48.66 |
| 25 | 47.15 | 47.28 | 47.27 | 47.09 | 46.91 | 46.81 | 47.18 | 47.79 | 48.63 | 48.45 | 48.48 | 48.67 |
| 26 | 47.17 | 47.31 | 47.34 | 47.00 | 46.93 | 46.76 | 47.20 | 47.85 | 48.65 | 48.43 | 48.46 | 48.67 |
| 27 | 47.14 | 47.29 | 47.27 | 47.02 | 46.88 | 46.75 | 47.22 | 47.92 | 48.64 | 48.45 | 48.44 | 48.67 |
| 28 | 47.15 | 47.31 | 47.28 | 47.09 | 46.87 | 46.79 | 47.25 | 47.98 | 48.64 | 48.43 | 48.45 | 48.68 |
| 29 | 47.18 | 47.29 | 47.26 | 47.01 | --- | 46.80 | 47.24 | 48.04 | 48.63 | 48.42 | 48.48 | 48.69 |
| 30 | 47.18 | 47.30 | 47.29 | 46.98 | --- | 46.76 | 47.25 | 48.11 | 48.63 | 48.44 | 48.49 | 48.70 |
| 31 | 47.20 | --- | 47.24 | 46.97 | --- | 46.77 | --- | 48.17 | --- | 48.43 | 48.50 | --- |
| MEAN | 47.11 | 47.26 | 47.30 | 47.11 | 46.94 | 46.82 | 47.02 | 47.52 | 48.52 | 48.54 | 48.43 | 48.60 |
| MAX | 47.20 | 47.31 | 47.34 | 47.23 | 46.99 | 46.89 | 47.25 | 48.17 | 48.65 | 48.66 | 48.50 | 48.70 |
| MIN | 47.00 | 47.21 | 47.24 | 46.97 | 46.87 | 46.75 | 46.74 | 47.22 | 48.21 | 48.42 | 48.38 | 48.51 |

WTR YR 1986 MEAN 47.60 MAX 48.70 MIN 46.74

## STAGE RECORDS

### 462458091274402 EAST EIGHTMILE LAKE NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'58", long 91°27'44", in NW 1/4 NE 1/4 NW 1/4 sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, at south end of lake, 10.2 mi south of Iron River.

DRAINAGE AREA.--0.25 mi$^2$. Area of lake, 0.050 mi$^2$.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 72.06 ft, Sept. 26-30, 1986; minimum observed gage height, 66.54 ft, July 2, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 72.06 ft, Sept. 26-30; minimum observed gage height, 70.52 ft, Oct. 20-22, 28-31, Nov. 11-15.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 70.54 | 70.53 | 70.69 | 70.73 | 70.73 | 70.78 | 70.93 | 71.13 | 71.26 | 71.47 | 71.69 | 71.76 |
| 2 | 70.55 | 70.54 | 70.70 | 70.73 | 70.73 | 70.78 | 70.93 | 71.12 | 71.24 | 71.47 | 71.69 | 71.76 |
| 3 | 70.55 | 70.54 | 70.70 | 70.73 | 70.73 | 70.78 | 70.93 | 71.11 | 71.23 | 71.45 | 71.68 | 71.79 |
| 4 | 70.55 | 70.54 | 70.70 | 70.73 | 70.73 | 70.78 | 70.93 | 71.10 | 71.26 | 71.45 | 71.67 | 71.86 |
| 5 | 70.56 | 70.54 | 70.70 | 70.73 | 70.73 | 70.78 | 70.95 | 71.10 | 71.26 | 71.47 | 71.67 | 71.86 |
| 6 | 70.55 | 70.53 | 70.70 | 70.73 | 70.73 | 70.78 | 70.96 | 71.10 | 71.26 | 71.48 | 71.67 | 71.85 |
| 7 | 70.54 | 70.53 | 70.70 | 70.73 | 70.73 | 70.78 | 70.97 | 71.09 | 71.30 | 71.49 | 71.70 | 71.83 |
| 8 | 70.55 | 70.53 | 70.70 | 70.72 | 70.73 | 70.78 | 70.98 | 71.06 | 71.33 | 71.48 | 71.72 | 71.82 |
| 9 | 70.56 | 70.53 | 70.70 | 70.72 | 70.73 | 70.78 | 70.98 | 71.06 | 71.32 | 71.48 | 71.73 | 71.81 |
| 10 | 70.55 | 70.53 | 70.70 | 70.72 | 70.73 | 70.79 | 70.99 | 71.08 | 71.32 | 71.48 | 71.77 | 71.83 |
| 11 | 70.53 | 70.52 | 70.70 | 70.72 | 70.73 | 70.79 | 70.99 | 71.12 | 71.35 | 71.49 | 71.77 | 71.84 |
| 12 | 70.55 | 70.52 | 70.70 | 70.72 | 70.73 | 70.79 | 70.99 | 71.15 | 71.37 | 71.54 | 71.75 | 71.85 |
| 13 | 70.56 | 70.52 | 70.70 | 70.72 | 70.73 | 70.79 | 70.99 | 71.29 | 71.37 | 71.60 | 71.75 | 71.85 |
| 14 | 70.56 | 70.52 | 70.70 | 70.72 | 70.73 | 70.80 | 70.98 | 71.32 | 71.37 | 71.60 | 71.76 | 71.85 |
| 15 | 70.56 | 70.52 | 70.70 | 70.72 | 70.73 | 70.80 | 71.01 | 71.33 | 71.37 | 71.62 | 71.78 | 71.85 |
| 16 | 70.55 | 70.54 | 70.70 | 70.72 | 70.73 | 70.80 | 71.01 | 71.34 | 71.37 | 71.64 | 71.78 | 71.84 |
| 17 | 70.55 | 70.56 | 70.70 | 70.72 | 70.73 | 70.80 | 71.01 | 71.34 | 71.37 | 71.64 | 71.78 | 71.86 |
| 18 | 70.55 | 70.57 | 70.70 | 70.72 | 70.73 | 70.82 | 71.00 | 71.33 | 71.37 | 71.65 | 71.77 | 71.87 |
| 19 | 70.53 | 70.60 | 70.70 | 70.72 | 70.73 | 70.84 | 71.01 | 71.31 | 71.37 | 71.68 | 71.76 | 71.89 |
| 20 | 70.52 | 70.60 | 70.70 | 70.72 | 70.77 | 70.85 | 71.02 | 71.30 | 71.37 | 71.69 | 71.76 | 71.93 |
| 21 | 70.52 | 70.60 | 70.70 | 70.72 | 70.77 | 70.84 | 71.02 | 71.28 | 71.39 | 71.68 | 71.76 | 71.94 |
| 22 | 70.52 | 70.60 | 70.70 | 70.72 | 70.77 | 70.84 | 71.01 | 71.28 | 71.44 | 71.67 | 71.77 | 72.03 |
| 23 | 70.53 | 70.60 | 70.70 | 70.72 | 70.77 | 70.83 | 71.00 | 71.27 | 71.45 | 71.67 | 71.79 | 72.03 |
| 24 | 70.53 | 70.60 | 70.71 | 70.72 | 70.77 | 70.82 | 71.01 | 71.27 | 71.46 | 71.66 | 71.79 | 72.03 |
| 25 | 70.53 | 70.61 | 70.71 | 70.73 | 70.77 | 70.81 | 71.03 | 71.27 | 71.45 | 71.66 | 71.79 | 72.05 |
| 26 | 70.53 | 70.62 | 70.72 | 70.73 | 70.77 | 70.81 | 71.04 | 71.27 | 71.46 | 71.66 | 71.79 | 72.06 |
| 27 | 70.53 | 70.62 | 70.73 | 70.73 | 70.78 | 70.81 | 71.10 | 71.27 | 71.48 | 71.71 | 71.78 | 72.06 |
| 28 | 70.52 | 70.62 | 70.73 | 70.73 | 70.78 | 70.82 | 71.12 | 71.27 | 71.49 | 71.72 | 71.76 | 72.06 |
| 29 | 70.52 | 70.63 | 70.73 | 70.73 | --- | 70.82 | 71.13 | 71.27 | 71.48 | 71.72 | 71.75 | 72.06 |
| 30 | 70.52 | 70.64 | 70.73 | 70.73 | --- | 70.83 | 71.13 | 71.27 | 71.48 | 71.71 | 71.75 | 72.06 |
| 31 | 70.52 | --- | 70.73 | 70.73 | --- | 70.86 | --- | 71.28 | --- | 71.71 | 71.76 | --- |
| MEAN | 70.54 | 70.57 | 70.71 | 70.72 | 70.74 | 70.81 | 71.01 | 71.22 | 71.37 | 71.59 | 71.75 | 71.91 |
| MAX | 70.56 | 70.64 | 70.73 | 70.73 | 70.78 | 70.86 | 71.13 | 71.34 | 71.49 | 71.72 | 71.79 | 72.06 |
| MIN | 70.52 | 70.52 | 70.69 | 70.72 | 70.73 | 70.78 | 70.93 | 71.06 | 71.23 | 71.45 | 71.67 | 71.76 |

CAL YR 1985 MEAN 70.17 MAX 70.73 MIN 69.72
WTR YR 1986 MEAN 71.08 MAX 72.06 MIN 70.52

## PRECIPITATION QUANTITY

### 462458091274403 EAST EIGHTMILE LAKE RAIN GAGE NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'58", long 91°27'44", in NW 1/4 NE 1/4 NW 1/4 sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, at south end of lake, 10.2 mi south of Iron River.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.06 in., July 9, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.84 in., May 13.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .24 | | | | | | --- | .03 | .00 | .00 | .11 | .05 |
| 2 | .01 | | | | | | --- | .00 | .00 | .00 | .08 | .00 |
| 3 | .00 | | | | | | --- | .00 | .42 | .00 | .00 | 1.23 |
| 4 | .15 | | | | | | --- | .00 | .17 | .27 | .17 | .34 |
| 5 | .01 | | | | | | --- | .00 | .00 | .34 | .03 | .21 |
| 6 | .00 | | | | | | --- | .00 | .00 | .01 | .02 | .00 |
| 7 | .25 | | | | | | --- | .00 | .80 | .00 | 1.16 | .00 |
| 8 | .20 | | | | | | --- | .24 | .00 | .02 | .01 | .00 |
| 9 | --- | | | | | | --- | .16 | .00 | .03 | .92 | .47 |
| 10 | .01 | | | | | | --- | .15 | .34 | .00 | .01 | .32 |
| 11 | .00 | | | | | | --- | .66 | .47 | .82 | .00 | .17 |
| 12 | .58 | | | | | | --- | .38 | .01 | 1.09 | .00 | .22 |
| 13 | --- | | | | | | --- | 1.84 | .00 | .05 | .19 | .00 |
| 14 | --- | | | | | | --- | .02 | .05 | .01 | .72 | .15 |
| 15 | --- | | | | | | --- | .41 | .05 | .76 | .00 | .12 |
| 16 | --- | | | | | | --- | .02 | .09 | .00 | .00 | .01 |
| 17 | --- | | | | | | .01 | .00 | .00 | .01 | .00 | .67 |
| 18 | --- | | | | | | .26 | .00 | .00 | .05 | .00 | .05 |
| 19 | --- | | | | | | .10 | .00 | .13 | .76 | .00 | .86 |
| 20 | --- | | | | | | .02 | .00 | .11 | .00 | .57 | .07 |
| 21 | --- | | | | | | .00 | .00 | .95 | .02 | .00 | 1.36 |
| 22 | --- | | | | | | .01 | .00 | .05 | .00 | .74 | .02 |
| 23 | --- | | | | | | .00 | .00 | .39 | .01 | .18 | .00 |
| 24 | --- | | | | | | 51 | .05 | .00 | .38 | .00 | .04 |
| 25 | --- | | | | | | .11 | .12 | .15 | .00 | .00 | .54 |
| 26 | --- | | | | | | .10 | .00 | .47 | .00 | .10 | .00 |
| 27 | --- | | | | | | .84 | .00 | .02 | 1.23 | .00 | .04 |
| 28 | --- | | | | | | .31 | .00 | .00 | .00 | .00 | .12 |
| 29 | --- | | | | | | .05 | .00 | .00 | .00 | .00 | .02 |
| 30 | --- | | | | | | .03 | .00 | .00 | .00 | .47 | .00 |
| 31 | --- | | | | | | --- | .00 | --- | .00 | .00 | --- |
| TOTAL | 1.45 | | | | | | 2.35 | 4.08 | 4.67 | 5.86 | 5.48 | 7.08 |

## PRECIPITATION QUANTITY

### 462457091273103 EAST EIGHTMILE LAKE RAIN GAGE AT WELL 45R NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'57", long 91°27'31", in NE 1/4 NE 1/4 NW 1/4 sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 300 ft southeast of lake, 10.2 mi south of Iron River.

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.97 in., June 26, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 1.95 in., June 29.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .72 | 1.44 | | | | | | --- | .00 | .00 | .00 | .06 |
| 2 | .09 | .00 | | | | | | --- | .00 | .00 | .00 | .00 |
| 3 | .00 | .00 | | | | | | --- | .39 | .00 | .00 | 1.14 |
| 4 | .63 | .00 | | | | | | --- | .15 | .24 | .00 | .30 |
| 5 | .00 | .00 | | | | | | --- | .00 | .36 | .00 | .00 |
| 6 | .09 | .63 | | | | | | --- | .00 | .03 | .00 | .00 |
| 7 | .36 | .00 | | | | | | --- | .81 | .00 | .00 | .00 |
| 8 | .09 | .00 | | | | | | --- | .00 | .00 | .00 | .00 |
| 9 | .00 | .00 | | | | | | --- | .00 | .00 | .00 | .39 |
| 10 | .00 | .09 | | | | | | --- | .33 | .00 | .00 | .18 |
| 11 | .00 | .18 | | | | | | --- | .03 | .87 | .00 | .18 |
| 12 | 1.71 | .00 | | | | | | --- | .03 | 1.11 | .00 | .21 |
| 13 | .09 | .00 | | | | | | --- | .00 | .06 | .09 | .00 |
| 14 | .00 | .00 | | | | | | .00 | .00 | .00 | .69 | .12 |
| 15 | .00 | --- | | | | | | .39 | .03 | .78 | .03 | .12 |
| 16 | .00 | --- | | | | | | .24 | .06 | .00 | .00 | .00 |
| 17 | .00 | --- | | | | | | .03 | .00 | .00 | .00 | .69 |
| 18 | .00 | --- | | | | | | .00 | .00 | .03 | .00 | .03 |
| 19 | .00 | --- | | | | | | .00 | .00 | .78 | .00 | .96 |
| 20 | .00 | --- | | | | | | .00 | .00 | .00 | .57 | .03 |
| 21 | .00 | --- | | | | | | .00 | .00 | .00 | .00 | 1.41 |
| 22 | .00 | --- | | | | | | .00 | .00 | .00 | .69 | .03 |
| 23 | .54 | --- | | | | | | .00 | .00 | .00 | .03 | .00 |
| 24 | .00 | --- | | | | | | .03 | .00 | .39 | .00 | .00 |
| 25 | .00 | --- | | | | | | .09 | .00 | .00 | .00 | .54 |
| 26 | .00 | --- | | | | | | .00 | .00 | .00 | .06 | .00 |
| 27 | .00 | --- | | | | | | .00 | .00 | .45 | .00 | .00 |
| 28 | .00 | --- | | | | | | .00 | .00 | .03 | .00 | .15 |
| 29 | .36 | --- | | | | | | .00 | 1.95 | .00 | .00 | .00 |
| 30 | .09 | --- | | | | | | .00 | .00 | .00 | .51 | .00 |
| 31 | .00 | --- | | | | | | .00 | --- | .00 | .00 | --- |
| TOTAL | 4.77 | 2.34 | | | | | | 0.78 | 3.78 | 5.13 | 2.67 | 6.54 |

PRECIPITATION QUANTITY

### 462428091265803 EAST EIGHTMILE LAKE RAIN GAGE AT WELL 15R NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'28", long 91°26'58", in NE 1/4 NE 1/4 SE 1/4 sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 0.75 mi southeast of lake, 10.2 mi south of Iron River.

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.82 in., June 26, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 1.71 in., Oct. 12.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
SUMMATION VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .72 | 1.44 | | | | | | --- | .03 | .00 | .09 | .18 |
| 2 | .00 | .00 | | | | | | --- | .03 | .00 | .09 | .00 |
| 3 | .09 | .00 | | | | | | --- | .48 | .00 | .00 | 1.11 |
| 4 | .81 | .00 | | | | | | --- | .09 | .30 | .18 | .24 |
| 5 | .09 | .00 | | | | | | --- | .03 | .39 | .00 | .00 |
| 6 | .00 | .72 | | | | | | --- | .00 | .00 | .09 | .00 |
| 7 | .72 | .00 | | | | | | --- | .93 | .00 | .93 | .03 |
| 8 | .54 | .00 | | | | | | --- | .00 | .03 | .00 | .03 |
| 9 | .00 | .09 | | | | | | --- | .03 | .00 | .00 | .51 |
| 10 | .00 | .09 | | | | | | --- | .30 | .00 | .00 | .15 |
| 11 | .00 | .09 | | | | | | --- | .60 | .99 | .00 | .15 |
| 12 | 1.71 | .00 | | | | | | --- | .00 | .87 | .00 | .21 |
| 13 | .00 | .00 | | | | | | .18 | .00 | .03 | .12 | .00 |
| 14 | .00 | .00 | | | | | | .00 | .03 | .00 | .60 | .18 |
| 15 | .09 | --- | | | | | | .42 | .03 | .81 | .03 | .09 |
| 16 | .00 | --- | | | | | | .06 | .09 | .03 | .03 | .03 |
| 17 | .00 | --- | | | | | | .00 | .00 | .03 | .03 | .78 |
| 18 | .00 | --- | | | | | | .00 | .00 | .06 | .03 | .03 |
| 19 | .18 | --- | | | | | | .00 | .09 | .78 | .03 | 1.02 |
| 20 | .00 | --- | | | | | | .00 | .12 | .00 | .54 | .03 |
| 21 | .00 | --- | | | | | | .03 | .99 | .03 | .00 | 1.38 |
| 22 | .00 | --- | | | | | | .00 | .06 | .00 | .75 | .06 |
| 23 | .63 | --- | | | | | | .03 | .30 | .00 | .00 | .06 |
| 24 | .09 | --- | | | | | | .06 | .00 | .45 | .00 | .06 |
| 25 | .00 | --- | | | | | | .15 | .18 | .00 | .03 | .60 |
| 26 | .00 | --- | | | | | | .03 | .42 | .00 | .09 | .03 |
| 27 | .00 | --- | | | | | | .03 | .06 | 1.17 | .00 | .00 |
| 28 | .00 | --- | | | | | | .03 | .03 | .00 | .00 | .12 |
| 29 | .36 | --- | | | | | | .03 | .00 | .00 | .00 | .03 |
| 30 | .09 | --- | | | | | | .03 | .00 | .00 | .39 | .00 |
| 31 | .00 | --- | | | | | | .03 | --- | .00 | .00 | --- |
| TOTAL | 6.12 | 2.43 | | | | | | 1.11 | 4.92 | 5.97 | 4.05 | 7.11 |

## GROUND-WATER LEVELS

### 462428091265801 WELL BA-45/09W/02-0186

LOCATION.--Lat 46°24'28", long 91°26'58", in NE 1/4 NE 1/4 SE 1/4, sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 0.75 mi southeast of East Eightmile Lake, about 10.2 mi south of Iron River.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 36 ft, cased to 33 ft, well screened 33-36 ft.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 74.06 ft, Sept. 29, 30, 1986; minimum observed water level, 68.54 ft, June 2-5, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 74.06 ft, Sept. 29, 30; minimum observed water level, 72.39 ft, Oct. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 72.41 | 72.56 | 72.70 | 72.77 | 72.83 | 72.84 | 72.86 | 72.98 | 73.25 | 73.55 | 73.77 | 73.94 |
| 2 | 72.41 | 72.56 | 72.67 | 72.77 | 72.84 | 72.86 | 72.84 | 72.96 | 73.25 | 73.56 | 73.77 | 73.94 |
| 3 | 72.42 | 72.55 | 72.66 | 72.77 | 72.84 | 72.84 | 72.83 | 72.97 | 73.27 | 73.57 | 73.77 | 73.95 |
| 4 | 72.44 | 72.54 | 72.70 | 72.78 | 72.85 | 72.84 | 72.84 | 73.02 | 73.28 | 73.60 | 73.77 | 73.96 |
| 5 | 72.44 | 72.55 | 72.71 | 72.81 | 72.86 | 72.86 | 72.88 | 73.03 | 73.28 | 73.60 | 73.78 | 73.96 |
| 6 | 72.44 | 72.57 | 72.71 | 72.77 | 72.84 | 72.85 | 72.89 | 73.04 | 73.31 | 73.60 | 73.79 | 73.95 |
| 7 | 72.45 | 72.57 | 72.72 | 72.72 | 72.84 | 72.79 | 72.91 | 73.00 | 73.33 | 73.60 | 73.81 | 73.95 |
| 8 | 72.45 | 72.56 | 72.72 | 72.77 | 72.85 | 72.85 | 72.90 | 72.99 | 73.33 | 73.60 | 73.81 | 73.97 |
| 9 | 72.39 | 72.56 | 72.72 | 72.83 | 72.85 | 72.88 | 72.89 | 73.00 | 73.33 | 73.60 | 73.81 | 73.98 |
| 10 | 72.41 | 72.55 | 72.72 | 72.80 | 72.84 | 72.88 | 72.90 | 73.01 | 73.36 | 73.60 | 73.82 | 73.99 |
| 11 | 72.43 | 72.55 | 72.73 | 72.83 | 72.84 | 72.84 | 72.92 | 73.04 | 73.38 | 73.63 | 73.82 | 73.99 |
| 12 | 72.48 | 72.57 | 72.75 | 72.80 | 72.84 | 72.83 | 72.93 | 73.04 | 73.38 | 73.63 | 73.83 | 73.99 |
| 13 | 72.46 | 72.57 | 72.74 | 72.78 | 72.86 | 72.85 | 72.93 | 73.06 | 73.38 | 73.63 | 73.84 | 73.94 |
| 14 | 72.46 | 72.58 | 72.75 | 72.80 | 72.87 | 72.85 | 72.93 | 73.08 | 73.39 | 73.63 | 73.86 | 73.94 |
| 15 | 72.48 | 72.58 | 72.75 | 72.80 | 72.87 | 72.85 | 72.93 | 73.09 | 73.40 | 73.65 | 73.86 | 73.96 |
| 16 | 72.45 | 72.61 | 72.75 | 72.83 | 72.87 | 72.83 | 72.91 | 73.09 | 73.40 | 73.66 | 73.86 | 73.96 |
| 17 | 72.48 | 72.61 | 72.75 | 72.85 | 72.87 | 72.83 | 72.91 | 73.10 | 73.39 | 73.67 | 73.86 | 73.99 |
| 18 | 72.47 | 72.62 | 72.74 | 72.84 | 72.88 | 72.86 | 72.94 | 73.11 | 73.42 | 73.67 | 73.85 | 74.00 |
| 19 | 72.46 | 72.63 | 72.74 | 72.83 | 72.87 | 72.84 | 72.96 | 73.11 | 73.45 | 73.69 | 73.86 | 73.99 |
| 20 | 72.46 | 72.62 | 72.75 | 72.84 | 72.84 | 72.78 | 72.96 | 73.13 | 73.45 | 73.69 | 73.88 | 73.99 |
| 21 | 72.48 | 72.58 | 72.77 | 72.85 | 72.82 | 72.81 | 72.94 | 73.14 | 73.46 | 73.69 | 73.86 | 74.00 |
| 22 | 72.50 | 72.64 | 72.80 | 72.81 | 72.85 | 72.88 | 72.93 | 73.16 | 73.49 | 73.69 | 73.89 | 74.03 |
| 23 | 72.52 | 72.65 | 72.79 | 72.79 | 72.85 | 72.82 | 72.96 | 73.16 | 73.49 | 73.71 | 73.89 | 74.04 |
| 24 | 72.51 | 72.63 | 72.75 | 72.85 | 72.84 | 72.81 | 72.96 | 73.17 | 73.49 | 73.72 | 73.89 | 74.04 |
| 25 | 72.50 | 72.64 | 72.76 | 72.86 | 72.86 | 72.87 | 72.96 | 73.18 | 73.49 | 73.72 | 73.90 | 74.05 |
| 26 | 72.52 | 72.67 | 72.82 | 72.81 | 72.88 | 72.84 | 72.97 | 73.18 | 73.52 | 73.72 | 73.90 | 74.05 |
| 27 | 72.49 | 72.64 | 72.77 | 72.82 | 72.83 | 72.81 | 72.97 | 73.20 | 73.53 | 73.75 | 73.91 | 74.05 |
| 28 | 72.49 | 72.67 | 72.78 | 72.86 | 72.81 | 72.86 | 72.99 | 73.21 | 73.53 | 73.75 | 73.91 | 74.05 |
| 29 | 72.52 | 72.64 | 72.79 | 72.84 | --- | 72.87 | 72.97 | 73.22 | 73.53 | 73.75 | 73.91 | 74.06 |
| 30 | 72.52 | 72.66 | 72.82 | 72.81 | --- | 72.85 | 72.99 | 73.24 | 73.54 | 73.76 | 73.92 | 74.06 |
| 31 | 72.54 | --- | 72.78 | 72.80 | --- | 72.87 | --- | 73.25 | --- | 73.76 | 73.93 | --- |
| MEAN | 72.47 | 72.60 | 72.75 | 72.81 | 72.85 | 72.84 | 72.92 | 73.10 | 73.40 | 73.66 | 73.85 | 73.99 |
| MAX | 72.54 | 72.67 | 72.82 | 72.86 | 72.88 | 72.88 | 72.99 | 73.25 | 73.54 | 73.76 | 73.93 | 74.06 |
| MIN | 72.39 | 72.54 | 72.66 | 72.72 | 72.81 | 72.78 | 72.83 | 72.96 | 73.25 | 73.55 | 73.77 | 73.94 |

CAL YR 1985 MEAN 72.12 MAX 72.82 MIN 71.72
WTR YR 1986 MEAN 73.10 MAX 74.06 MIN 72.39

## GROUND-WATER LEVELS

### 462457091273101 WELL BA-45/09W/02-0200

LOCATION.--Lat 46°24'57", long 91°27'31", in NE 1/4 NE 1/4 NW 1/4, sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 300 ft southeast of East Eightmile Lake, about 10.2 mi south of Iron River.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 50 ft, cased to 47 ft, well screened 47-50 ft.

PERIOD OF RECORD.--December 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 72.33 ft Sept. 29, 30, 1986; minimum observed water level, 70.03 ft, Feb. 27, Mar. 2, 3, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum observed water level, 72.33 ft, Sept. 29, 30; minimum observed water level, 70.77 ft, Oct. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 70.77 | 70.89 | 71.00 | 71.09 | 71.09 | 71.10 | 71.16 | 71.39 | 71.64 | 71.85 | 71.99 | 72.08 |
| 2 | 70.78 | 70.89 | 71.01 | 71.08 | 71.10 | 71.12 | 71.17 | 71.38 | 71.64 | 71.84 | 71.99 | 72.07 |
| 3 | 70.79 | 70.89 | 71.01 | 71.08 | 71.10 | 71.11 | 71.18 | 71.39 | 71.66 | 71.85 | 71.99 | 72.08 |
| 4 | 70.80 | 70.89 | 71.02 | 71.08 | 71.10 | 71.10 | 71.19 | 71.41 | 71.67 | 71.86 | 71.99 | 72.11 |
| 5 | 70.80 | 70.89 | 71.03 | 71.09 | 71.10 | 71.09 | 71.20 | 71.42 | 71.67 | 71.86 | 71.99 | 72.12 |
| 6 | 70.81 | 70.90 | 71.03 | 71.09 | 71.08 | 71.09 | 71.22 | 71.42 | 71.68 | 71.84 | 71.99 | 72.12 |
| 7 | 70.81 | 70.91 | 71.04 | 71.06 | 71.09 | 71.07 | 71.24 | 71.39 | 71.69 | 71.85 | 72.00 | 72.12 |
| 8 | 70.82 | 70.91 | 71.05 | 71.06 | 71.09 | 71.08 | 71.25 | 71.39 | 71.69 | 71.85 | 72.01 | 72.13 |
| 9 | 70.81 | 70.90 | 71.04 | 71.11 | 71.09 | 71.11 | 71.25 | 71.39 | 71.69 | 71.83 | 72.02 | 72.13 |
| 10 | 70.82 | 70.90 | 71.04 | 71.09 | 71.09 | 71.11 | 71.27 | 71.40 | 71.71 | 71.84 | 72.02 | 72.14 |
| 11 | 70.83 | 70.89 | 71.04 | 71.09 | 71.09 | 71.10 | 71.27 | 71.42 | 71.72 | 71.84 | 72.03 | 72.14 |
| 12 | 70.84 | 70.90 | 71.05 | 71.10 | 71.09 | 71.08 | 71.28 | 71.43 | 71.73 | 71.85 | 72.03 | 72.13 |
| 13 | 70.85 | 70.91 | 71.05 | 71.07 | 71.09 | 71.09 | 71.28 | 71.45 | 71.74 | 71.86 | 72.04 | 72.11 |
| 14 | 70.85 | 70.91 | 71.05 | 71.08 | 71.11 | 71.11 | 71.30 | 71.48 | 71.74 | 71.87 | 72.04 | 72.12 |
| 15 | 70.86 | 70.90 | 71.06 | 71.08 | 71.11 | 71.10 | 71.29 | 71.50 | 71.75 | 71.89 | 72.04 | 72.13 |
| 16 | 70.85 | 70.92 | 71.06 | 71.08 | 71.11 | 71.09 | 71.28 | 71.52 | 71.75 | 71.91 | 72.05 | 72.13 |
| 17 | 70.86 | 70.92 | 71.06 | 71.09 | 71.11 | 71.09 | 71.30 | 71.54 | 71.74 | 71.92 | 72.04 | 72.15 |
| 18 | 70.86 | 70.92 | 71.06 | 71.09 | 71.12 | 71.10 | 71.31 | 71.55 | 71.76 | 71.93 | 72.04 | 72.15 |
| 19 | 70.86 | 70.93 | 71.06 | 71.08 | 71.10 | 71.11 | 71.33 | 71.56 | 71.77 | 71.94 | 72.04 | 72.16 |
| 20 | 70.86 | 70.93 | 71.06 | 71.08 | 71.09 | 71.07 | 71.33 | 71.57 | 71.77 | 71.94 | 72.05 | 72.17 |
| 21 | 70.86 | 70.91 | 71.07 | 71.09 | 71.08 | 71.08 | 71.32 | 71.59 | 71.77 | 71.95 | 72.04 | 72.19 |
| 22 | 70.87 | 70.93 | 71.09 | 71.08 | 71.09 | 71.12 | 71.32 | 71.60 | 71.79 | 71.95 | 72.06 | 72.23 |
| 23 | 70.87 | 70.95 | 71.08 | 71.06 | 71.10 | 71.11 | 71.34 | 71.60 | 71.80 | 71.95 | 72.06 | 72.26 |
| 24 | 70.88 | 70.96 | 71.07 | 71.09 | 71.10 | 71.08 | 71.34 | 71.61 | 71.80 | 71.96 | 72.06 | 72.27 |
| 25 | 70.87 | 70.96 | 71.07 | 71.12 | 71.10 | 71.11 | 71.34 | 71.61 | 71.82 | 71.96 | 72.07 | 72.30 |
| 26 | 70.88 | 70.99 | 71.10 | 71.10 | 71.12 | 71.12 | 71.34 | 71.62 | 71.83 | 71.96 | 72.07 | 72.30 |
| 27 | 70.88 | 70.98 | 71.09 | 71.09 | 71.11 | 71.10 | 71.35 | 71.63 | 71.83 | 71.97 | 72.06 | 72.31 |
| 28 | 70.87 | 70.99 | 71.09 | 71.12 | 71.09 | 71.12 | 71.38 | 71.64 | 71.84 | 71.98 | 72.06 | 72.32 |
| 29 | 70.87 | 70.99 | 71.09 | 71.12 | --- | 71.13 | 71.38 | 71.64 | 71.85 | 71.99 | 72.06 | 72.33 |
| 30 | 70.87 | 70.99 | 71.10 | 71.09 | --- | 71.12 | 71.39 | 71.65 | 71.85 | 71.99 | 72.07 | 72.33 |
| 31 | 70.88 | --- | 71.10 | 71.09 | --- | 71.14 | --- | 71.66 | --- | 71.99 | 72.07 | --- |
| MEAN | 70.84 | 70.93 | 71.06 | 71.09 | 71.10 | 71.10 | 71.29 | 71.51 | 71.75 | 71.91 | 72.03 | 72.18 |
| MAX | 70.88 | 70.99 | 71.10 | 71.12 | 71.12 | 71.14 | 71.39 | 71.66 | 71.85 | 71.99 | 72.07 | 72.33 |
| MIN | 70.77 | 70.89 | 71.00 | 71.06 | 71.08 | 71.07 | 71.16 | 71.38 | 71.64 | 71.83 | 71.99 | 72.07 |

WTR YR 1986 MEAN 71.40 MAX 72.33 MIN 70.77

## GROUND-WATER LEVELS

### 462512091274501 WELL BA-45/09W/35-0255

**LOCATION.**--Lat 46°25'12", long 91°27'45", in SW 1/4 SW 1/4 NE 1/4, sec.35, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 40 ft northwest of East Eightmile Lake, about 10.2 mi south of Iron River.

**AQUIFER.**--Sand and gravel.

**WELL CHARACTERISTICS.**--Augered water-table observation well, diameter 3 in., depth 10 ft, cased to 8 ft, well screened 8-10 ft.

**PERIOD OF RECORD.**--October 1985 to September 1986.

**GAGE.**--Water-stage recorder. Datum of gage is 1,100.00 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good.

**EXTREMES FOR CURRENT PERIOD.**--Maximum observed water level, 71.88 ft, Sept. 24-30; minimum observed water level, 70.38 ft, Oct. 24-31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 70.39 | 70.52 | 70.57 | 70.54 | 70.56 | 70.85 | 70.94 | 71.11 | 71.33 | 71.55 | 71.61 |
| 2 | --- | 70.40 | 70.53 | 70.57 | 70.54 | 70.56 | 70.80 | 70.94 | 71.11 | 71.32 | 71.54 | 71.61 |
| 3 | --- | 70.40 | 70.53 | 70.57 | 70.54 | 70.56 | 70.77 | 70.93 | 71.11 | 71.32 | 71.54 | 71.63 |
| 4 | --- | 70.40 | 70.54 | 70.57 | 70.54 | 70.56 | 70.77 | 70.93 | 71.12 | 71.32 | 71.53 | 71.69 |
| 5 | --- | 70.40 | 70.55 | 70.57 | 70.54 | 70.56 | 70.78 | 70.93 | 71.12 | 71.33 | 71.53 | 71.69 |
| 6 | --- | 70.40 | 70.55 | 70.56 | 70.54 | 70.56 | 70.79 | 70.93 | 71.12 | 71.33 | 71.53 | 71.68 |
| 7 | --- | 70.40 | 70.55 | 70.55 | 70.54 | 70.56 | 70.79 | 70.91 | 71.15 | 71.33 | 71.54 | 71.67 |
| 8 | --- | 70.40 | 70.55 | 70.55 | 70.54 | 70.56 | 70.79 | 70.90 | 71.17 | 71.33 | 71.57 | 71.66 |
| 9 | --- | 70.40 | 70.55 | 70.56 | 70.54 | 70.56 | 70.79 | 70.91 | 71.17 | 71.33 | 71.57 | 71.65 |
| 10 | --- | 70.40 | 70.55 | 70.56 | 70.54 | 70.57 | 70.79 | 70.92 | 71.18 | 71.33 | 71.61 | 71.67 |
| 11 | --- | 70.40 | 70.55 | 70.56 | 70.54 | 70.57 | 70.79 | 70.97 | 71.20 | 71.34 | 71.61 | 71.68 |
| 12 | --- | 70.40 | 70.55 | 70.55 | 70.54 | 70.57 | 70.79 | 70.99 | 71.22 | 71.40 | 71.60 | 71.68 |
| 13 | --- | 70.40 | 70.56 | 70.54 | 70.54 | 70.57 | 70.79 | 71.11 | 71.22 | 71.46 | 71.59 | 71.68 |
| 14 | --- | 70.40 | 70.56 | 70.54 | 70.54 | 70.58 | 70.79 | 71.14 | 71.22 | 71.46 | 71.61 | 71.68 |
| 15 | --- | 70.40 | 70.56 | 70.54 | 70.54 | 70.58 | 70.82 | 71.14 | 71.22 | 71.46 | 71.62 | 71.68 |
| 16 | --- | 70.41 | 70.56 | 70.54 | 70.54 | 70.58 | 70.82 | 71.16 | 71.23 | 71.48 | 71.62 | 71.68 |
| 17 | --- | 70.42 | 70.56 | 70.54 | 70.54 | 70.58 | 70.82 | 71.16 | 71.22 | 71.48 | 71.62 | 71.70 |
| 18 | --- | 70.42 | 70.56 | 70.54 | 70.54 | 70.59 | 70.82 | 71.16 | 71.22 | 71.48 | 71.61 | 71.71 |
| 19 | --- | 70.46 | 70.56 | 70.54 | 70.54 | 70.61 | 70.83 | 71.15 | 71.22 | 71.52 | 71.61 | 71.71 |
| 20 | --- | 70.46 | 70.56 | 70.54 | 70.54 | 70.61 | 70.83 | 71.14 | 71.22 | 71.53 | 71.61 | 71.76 |
| 21 | --- | 70.44 | 70.56 | 70.54 | 70.54 | 70.61 | 70.84 | 71.14 | 71.25 | 71.53 | 71.62 | 71.77 |
| 22 | --- | 70.45 | 70.57 | 70.53 | 70.55 | 70.62 | 70.84 | 71.13 | 71.29 | 71.52 | 71.63 | 71.87 |
| 23 | --- | 70.45 | 70.56 | 70.53 | 70.55 | 70.61 | 70.84 | 71.13 | 71.29 | 71.51 | 71.64 | 71.87 |
| 24 | 70.38 | 70.46 | 70.56 | 70.54 | 70.55 | 70.61 | 70.84 | 71.12 | 71.30 | 71.51 | 71.64 | 71.86 |
| 25 | 70.38 | 70.46 | 70.56 | 70.54 | 70.55 | 70.61 | 70.85 | 71.12 | 71.30 | 71.51 | 71.64 | 71.88 |
| 26 | 70.38 | 70.48 | 70.58 | 70.54 | 70.57 | 70.62 | 70.86 | 71.12 | 71.31 | 71.50 | 71.63 | 71.88 |
| 27 | 70.38 | 70.48 | 70.57 | 70.54 | 70.56 | 70.61 | 70.90 | 71.12 | 71.33 | 71.55 | 71.62 | 71.88 |
| 28 | 70.38 | 70.48 | 70.57 | 70.54 | 70.56 | 70.62 | 70.93 | 71.12 | 71.33 | 71.56 | 71.61 | 71.88 |
| 29 | 70.38 | 70.48 | 70.57 | 70.54 | --- | 70.66 | 70.93 | 71.12 | 71.33 | 71.56 | 71.60 | 71.88 |
| 30 | 70.38 | 70.48 | 70.58 | 70.54 | --- | 70.69 | 70.94 | 71.12 | 71.33 | 71.56 | 71.60 | 71.88 |
| 31 | 70.38 | --- | 70.57 | 70.54 | --- | 70.78 | --- | 71.12 | --- | 71.56 | 71.61 | --- |
| MEAN | --- | 70.43 | 70.56 | 70.55 | 70.54 | 70.60 | 70.83 | 71.06 | 71.22 | 71.44 | 71.60 | 71.74 |
| MAX | --- | 70.48 | 70.58 | 70.57 | 70.57 | 70.78 | 70.94 | 71.16 | 71.33 | 71.56 | 71.64 | 71.88 |
| MIN | --- | 70.39 | 70.52 | 70.53 | 70.54 | 70.56 | 70.77 | 70.90 | 71.11 | 71.32 | 71.53 | 71.61 |

## GROUND-WATER LEVELS

### 462457091273501 WELL BA-45/09W/02-0256

**LOCATION.**--Lat 46°24'57", long 91°27'35", in NW 1/4 NE 1/4 NW 1/4, sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 30 ft southeast of East Eightmile Lake, about 10.2 mi south of Iron River.

**AQUIFER.**--Sand and gravel.

**WELL CHARACTERISTICS.**--Augered water-table observation well, diameter 3 in., depth 10 ft, cased to 8 ft, well screened 8-10 ft.

**PERIOD OF RECORD.**--October 1985 to September 1986.

**GAGE.**--Water-stage recorder. Datum of gage is 1,100.00 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good.

**EXTREMES FOR CURRENT PERIOD.**--Maximum observed water level, 71.99 ft, Sept. 22-30; minimum observed water level, 70.65 ft, Nov. 19, 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | 70.74 | 70.81 | 70.84 | 70.87 | 71.05 | 71.15 | 71.30 | 71.51 | 71.72 | 71.81 |
| 2 | --- | --- | 70.75 | 70.81 | 70.85 | 70.86 | 71.02 | 71.14 | 71.29 | 71.50 | 71.71 | 71.81 |
| 3 | --- | --- | 70.72 | 70.81 | 70.85 | 70.86 | 71.01 | 71.13 | 71.29 | 71.50 | 71.70 | 71.83 |
| 4 | --- | --- | 70.76 | 70.82 | 70.85 | 70.86 | 71.01 | 71.14 | 71.32 | 71.51 | 71.70 | 71.89 |
| 5 | --- | --- | 70.77 | 70.83 | 70.85 | 70.86 | 71.02 | 71.14 | 71.32 | 71.51 | 71.70 | 71.89 |
| 6 | --- | --- | 70.77 | 70.83 | 70.85 | 70.86 | 71.03 | 71.13 | 71.32 | 71.52 | 71.70 | 71.87 |
| 7 | --- | --- | 70.77 | 70.83 | 70.85 | 70.86 | 71.04 | 71.11 | 71.35 | 71.52 | 71.73 | 71.86 |
| 8 | --- | --- | 70.77 | 70.83 | 70.85 | 70.86 | 71.04 | 71.11 | 71.36 | 71.52 | 71.76 | 71.86 |
| 9 | --- | --- | 70.77 | 70.83 | 70.85 | 70.85 | 71.04 | 71.12 | 71.36 | 71.51 | 71.76 | 71.85 |
| 10 | --- | --- | 70.77 | 70.82 | 70.84 | 70.85 | 71.04 | 71.12 | 71.37 | 71.50 | 71.80 | 71.88 |
| 11 | --- | --- | 70.77 | 70.82 | 70.85 | 70.85 | 71.04 | 71.16 | 71.39 | 71.52 | 71.79 | 71.89 |
| 12 | --- | --- | 70.77 | 70.81 | 70.86 | 70.85 | 71.04 | 71.18 | 71.41 | 71.57 | 71.77 | 71.89 |
| 13 | --- | --- | 70.78 | 70.81 | 70.86 | 70.85 | 71.03 | 71.29 | 71.41 | 71.61 | 71.77 | 71.88 |
| 14 | --- | --- | 70.79 | 70.81 | 70.86 | 70.85 | 71.04 | 71.34 | 71.41 | 71.61 | 71.79 | 71.88 |
| 15 | --- | --- | 70.79 | 70.81 | 70.86 | 70.85 | 71.06 | 71.34 | 71.41 | 71.63 | 71.81 | 71.88 |
| 16 | --- | --- | 70.79 | 70.82 | 70.86 | 70.84 | 71.05 | 71.35 | 71.41 | 71.66 | 71.81 | 71.88 |
| 17 | --- | --- | 70.79 | 70.82 | 70.86 | 70.85 | 71.05 | 71.35 | 71.40 | 71.66 | 71.80 | 71.90 |
| 18 | --- | --- | 70.78 | 70.82 | 70.86 | 70.88 | 71.06 | 71.35 | 71.40 | 71.66 | 71.79 | 71.91 |
| 19 | --- | 70.65 | 70.78 | 70.81 | 70.86 | 70.88 | 71.07 | 71.34 | 71.42 | 71.69 | 71.78 | 71.92 |
| 20 | --- | 70.66 | 70.78 | 70.81 | 70.87 | 70.88 | 71.07 | 71.33 | 71.42 | 71.70 | 71.79 | 71.96 |
| 21 | --- | 70.65 | 70.79 | 70.82 | 70.87 | 70.88 | 71.07 | 71.32 | 71.44 | 71.69 | 71.80 | 71.97 |
| 22 | --- | 70.66 | 70.80 | 70.82 | 70.87 | 70.90 | 71.07 | 71.32 | 71.48 | 71.68 | 71.81 | 71.99 |
| 23 | --- | 70.67 | 70.80 | 70.82 | 70.87 | 70.88 | 71.07 | 71.31 | 71.48 | 71.68 | 71.83 | 71.99 |
| 24 | 70.71 | 70.68 | 70.80 | 70.83 | 70.87 | 70.87 | 71.06 | 71.31 | 71.49 | 71.68 | 71.82 | 71.99 |
| 25 | 70.71 | 70.68 | 70.80 | 70.84 | 70.87 | 70.89 | 71.08 | 71.31 | 71.49 | 71.68 | 71.82 | 71.99 |
| 26 | 70.71 | 70.70 | 70.83 | 70.83 | 70.88 | 70.88 | 71.09 | 71.31 | 71.50 | 71.68 | 71.82 | 71.99 |
| 27 | --- | 70.69 | 70.82 | 70.83 | 70.87 | 70.88 | 71.13 | 71.31 | 71.51 | 71.73 | 71.81 | 71.99 |
| 28 | --- | 70.70 | 70.82 | 70.85 | 70.84 | 70.89 | 71.16 | 71.31 | 71.51 | 71.74 | 71.80 | 71.99 |
| 29 | --- | 70.70 | 70.82 | 70.84 | --- | 70.91 | 71.16 | 71.31 | 71.51 | 71.73 | 71.79 | 71.99 |
| 30 | --- | 70.71 | 70.83 | 70.84 | --- | 70.92 | 71.16 | 71.31 | 71.51 | 71.73 | 71.80 | 71.99 |
| 31 | --- | --- | 70.81 | 70.84 | --- | 70.96 | --- | 71.31 | --- | 71.72 | 71.81 | --- |
| MEAN | --- | --- | 70.78 | 70.82 | 70.86 | 70.87 | 71.06 | 71.25 | 71.41 | 71.62 | 71.78 | 71.91 |
| MAX | --- | --- | 70.83 | 70.85 | 70.88 | 70.96 | 71.16 | 71.35 | 71.51 | 71.74 | 71.83 | 71.99 |
| MIN | --- | --- | 70.72 | 70.81 | 70.84 | 70.84 | 71.01 | 71.11 | 71.29 | 71.50 | 71.70 | 71.81 |

The following streamflow stations have been discontinued in Wisconsin. Continuous daily streamflow records were collected and published for the period of record shown for each station.

| Station number | Station name | Drainage area (sq mi) | Period of record |
|---|---|---|---|
| 04024314 | Little Balsam Creek at Patzau, WI | 5.00 | 1976-78 |
| 04024315 | Little Balsam Creek near Patzau, WI | 5.18 | 1975-78 |
| 04024318 | Little Balsam Creek Tributary near Patzau, WI | 0.54 | 1976-78 |
| 04024320 | Little Balsam Creek near Foxboro, WI | 6.27 | 1977-78 |
| 04025000 | Amnicon River near Poplar (Amnicon Falls), WI | 112 | 1914-16 |
| 04026000 | Bois Brule (Brule) River near Brule, WI | 153 | 1914-17 |
| 04026300 | Sioux River near Washburn, WI | 14.9 | 1964-66 |
| 04026347 | Pine Creek at Moquah, WI | 5.90 | 1975-78 |
| 04026348 | Pine Creek Tributary at Moquah, WI | 0.57 | 1976-78 |
| 04026349 | Pine Creek near Moquah, WI | 21.5 | 1975-78 |
| 04026450 | Bad River near Mellen, WI | 83.4 | 1970-75 |
| 04026500 | Bad River at Mellen, WI | 101 | 1948-55 |
| 04026870 | Alder Creek near Upson, WI | 22.3 | 1972-77 |
| 04028530 | Montreal River near Kimball, WI | 109 | 1924-25 |
| 04029000 | West Fork Montreal River at Gile, WI | 78 | 1918-25, 1942-47 |
| 04029500 | West Fork Montreal River near Kimball, WI | 96 | 1924-25 |
| 04030000 | Montreal River near Saxon, WI | 262 | 1938-70 |
| 04063640 | North Branch Pine River at Windsor Dam nr Alvin, WI | 29.4 | 1966-68 |
| 04064000 | Pine River near Florence, WI | 500 | 1913-23 |
| 04064500 | Pine River below Pine River Powerplant near Florence, WI | 528 | 1923-75 |
| 04066500 | Pike River at Amberg, WI | 253 | 1914-70 |
| 04067000 | Menominee River below Koss, MI | 3,730 | 1907-09, 1913-81 |
| 04068000 | Peshtigo River at High Falls near Crivitz, WI | 554 | 1912-57 |
| 04072000 | Suamico River at Suamico, WI | 57.0 | 1951-52 |
| 04072750 | Lawrence Creek near Westfield, WI | 16.0 | 1967-73 |
| 04073050 | Grand River near Kingston, WI | 73.7 | 1968-75 |
| 04073405 | West Branch White River near Wautoma, WI | 43 | 1963-65 |
| 04074548 | Swamp Creek below Rice Lake at Mole Lake, WI | 56.8 | 1977-79, 1982-85 |
| 04075000 | Wolf River near White Lake, WI | 482 | 1935-37 |
| 04075200 | Evergreen Creek near Langlade, WI | 8.0 | 1964-73 |
| 04075500 | Wolf River above West Branch Wolf River, WI | 633 | 1927-62 |
| 04076000 | West Branch Wolf River at Neopit, WI | 108 | 1911-17 |
| 04076500 | West Branch Wolf River near Keshena, WI | 170 | 1928-31 |
| 04078500 | Embarrass River near Embarrass, WI | 384 | 1919-85 |
| 04079602 | Little Wolf River near Galloway, WI | 22.5 | 1973-79 |
| 04079700 | Spaulding Creek near Big Falls, WI | 4.9 | 1964-66 |
| 04080000 | Little Wolf River at Royalton, WI | 507 | 1914-70, 1982-85 |
| 04080950 | Emmons Creek near Rural, WI | 27 | 1968-74 |
| 04080976 | Storm Sewer to Mirror Lake at Waupaca, WI | 0.04 | 1971-74 |
| 04081000 | Waupaca River near Waupaca, WI | 265 | 1916-66, 1982-85 |
| 04081800 | Daggets Creek at Butte Des Morts, WI | 10.3 | 1976-77 |
| 04083000 | West Branch Fond du Lac River at Fond du Lac, WI | 84.5 | 1939-54 |
| 04083500 | East Branch Fond du Lac River near Fond du Lac, WI | 77.9 | 1939-54 |
| 04084200 | Brothertown Creek at Brothertown, WI | 5.59 | 1976-77 |
| 04085813 | Onion River at Hingham, WI | 37.2 | 1978-80 |
| 04085845 | Onion River near Sheboygan Falls, WI | 94.1 | 1978-82 |
| 04086150 | Milwaukee River at Kewaskum, WI | 138 | 1968-81 |
| 04086200 | East Branch Milwaukee River near New Fane, WI | 54.1 | 1968-81 |
| 04086340 | North Branch Milwaukee River near Fillmore, WI | 148 | 1968-81 |
| 04086360 | Milwaukee River at Waubeka, WI | 432 | 1968-81 |
| 04086488 | Mud Lake Outlet near Decker Corner, WI | 7.36 | 1982-84 |
| 04087010 | Milwaukee River above North Avenue Dam at Milwaukee, WI | 702 | 1982-84 |
| 04087018 | Menomonee River at Germantown, WI | 19.0 | 1974-77 |
| 04087019 | Jefferson Park Drainageway at Germantown, WI | 1.82 | 1976-78 |
| 04087040 | Menomonee River at Butler, WI | 60.6 | 1974-79 |
| 04087060 | Noyes Creek at Milwaukee, WI | 1.94 | 1974-79 |
| 04087070 | Little Menomonee River at Milwaukee, WI | 19.7 | 1974-77 |
| 04087119 | Honey Creek at Wauwatosa, WI | 10.3 | 1974-81 |
| 04087125 | Schoonmaker Creek at Wauwatosa, WI | 1.94 | 1974-79 |
| 04087130 | Hawley Road Storm Sewer at Milwaukee, WI | 1.83 | 1975-77 |
| 04087138 | Menomonee River at Milwaukee, WI | 134 | 1981-84 |
| 04087160 | Kinnickinnic River at Milwaukee, WI | 20.4 | 1976-82 |
| 05332000 | Namekagon River at Trego, WI | 460 | 1914-27 |
| 05332500 | Namekagon River near Trego, WI | 503 | 1927-70 |
| 05335010 | Loon Creek near Danbury, WI | 16.9 | 1970-71 |
| 05335380 | Bashaw Brook near Shell Lake, WI | 24.9 | 1964-66 |
| 05335500 | Clam River near Webster, WI | 364 | 1940-42 |
| 05336000 | St. Croix River near Grantsburg, WI | 2,820 | 1923-70 |
| 05339000 | Wood River near Grantsburg, WI | 190 | 1939 |
| 05341500 | Apple River near Somerset, WI | 555 | 1901-70 |
| 05342000 | Kinnickinnic River near River Falls, WI | 167 | 1916-21 |
| 05355500 | West Fork Chippewa River at Lessards, nr Winter, WI | 577 | 1911-16 |
| 05356121 | Couderay River near Couderay, WI | 169 | 1981-83 |
| 05357500 | Flambeau River at Flambeau Flowage (Flambeau Reservoir), WI | 666 | 1927-61 |
| 05358000 | Flambeau River near Butternut, WI | 737 | 1914-38 |

| Station number | Station name | Drainage area (sq mi) | Period of record |
|---|---|---|---|
| 05358300 | Pine Creek near Oxbo, WI | 37.8 | 1970-75 |
| 05358500 | Flambeau River at Babbs Island near Winter, WI | 1,000 | 1929-75 |
| 05359500 | South Fork Flambeau River near Phillips, WI | 615 | 1929-75 |
| 05359600 | Price Creek near Phillips, WI | 14.7 | 1964-66 |
| 05360000 | Flambeau River near (at) Ladysmith, WI | 1,823 | 1903-06, 1914-61 |
| 05361000 | Chippewa River near Holcombe, WI | 3,790 | 1944-49 |
| 05361500 | South Fork Jump River near Ogema, WI | 328 | 1944-54 |
| 05362500 | Chippewa River at Holcombe, WI | 4,700 | 1942-49 |
| 05363000 | Fisher River at (near) Holcombe, WI | 76 | 1944-45 |
| 05363500 | O'Neil Creek near Chippewa Falls, WI | 67.1 | 1944-45 |
| 05363700 | Yellow River near Hannibal, WI | 91.2 | 1962-63 |
| 05364000 | Yellow River at Cadott, WI | 351 | 1942-61 |
| 05364500 | Duncan Creek at Bloomer, WI | 49.2 | 1943-51 |
| 05365000 | Duncan Creek at Chippewa Falls, WI | 114 | 1942-55 |
| 05365500 | Chippewa River at Chippewa Falls, WI | 5,650 | 1888-1983 |
| 05366000 | Eau Claire River near Augusta, WI | 500 | 1914-26 |
| 05366300 | Bridge Creek at Augusta, WI | 34.5 | 1979-80 |
| 05366500 | Eau Claire River near Fall Creek, WI | 758 | 1942-55 |
| 05367000 | Chippewa River at (near) Eau Claire, WI | 6,630 | 1902-09, 1944-54 |
| 05367425 | Red Cedar River near Cameron, WI | 450 | 1966-70 |
| 05367426 | Red Cedar River near Cameron, WI | 453 | 1971-73 |
| 05367500 | Red Cedar River near Colfax, WI | 1,100 | 1914-61 |
| 05369900 | Eau Galle River near Woodville, WI | 39.4 | 1978-83 |
| 05369945 | Eau Galle River at Low-Water Bridge at Spring Valley, WI | 47.9 | 1981-83 |
| 05369955 | French Creek near Spring Valley, WI | 6.03 | 1980-83 |
| 05369970 | Lousy Creek near Spring Valley, WI | 5.97 | 1980-83 |
| 05369985 | Lohn Creek near Spring Valley, WI | 2.53 | 1980-83 |
| 05370500 | Eau Galle River at Elmwood, WI | 91.9 | 1942-53 |
| 05372000 | Buffalo River near Tell, WI | 406 | 1932-51 |
| 05379288 | Bruce Valley Creek near Pleasantville, WI | 10.1 | 1979-80 |
| 05379305 | Elk Creek near Independence, WI | 99.7 | 1979-80 |
| 05379400 | Trempealeau River at Arcadia, WI | 552 | 1960-77 |
| 05380000 | Trempealeau River near Trempealeau, WI | 722 | 1931-34 |
| 05380900 | Poplar River near Owen, WI | 157 | 1964-66 |
| 05382500 | Little LaCrosse River near Leon, WI | 77.4 | 1934-61, 1978-81 |
| 05383000 | LaCrosse River near West Salem, WI | 398 | 1913-70 |
| 05386490 | Spring Coulee Creek near Coon Valley, WI | 8.93 | 1978-81 |
| 05386500 | Coon Creek at Coon Valley, WI | 78.3 | 1934-40, 1978-81 |
| 05386999 | Coon Creek near Stoddard, WI | 120 | 1934-40, 1979-81 |
| 05387100 | North Fork Bad Axe River near Genoa, WI | 68.8 | 1964-66 |
| 05390180 | Wisconsin River at Conover, WI | 176 | 1966-71 |
| 05391226 | Pelican River near Rhinelander, WI | 101 | 1976-79 |
| 05392000 | Wisconsin River at Whirlpool Rapids, near Rhinelander, WI | 1,200 | 1905-61 |
| 05392350 | Bearskin Creek near Harshaw, WI | 27.8 | 1964-66 |
| 05392400 | Tomahawk River near Bradley, WI | 422 | 1914-27, 1928-29 |
| 05393000 | Tomahawk River at Bradley, WI | 545 | 1930-73 |
| 05394000 | New Wood River near Merrill, WI | 83.1 | 1952-61 |
| 05396000 | Rib River at Rib Falls, WI | 309 | 1925-57 |
| 05396500 | Little Rib River near Wausau, WI | 76 | 1914-16 |
| 05397000 | East Branch Eau Claire River near Antigo, WI | 75 | 1949-55 |
| 05397110 | Eau Claire River near Antigo, WI | 200 | 1974-81 |
| 05398500 | Bull Junior Creek (Bull Creek Junior) near Rothschild, WI | 26.4 | 1944-51 |
| 05399000 | Big Eau Pleine River near Colby, WI | 79 | 1941-54 |
| 05399431 | Hamann Creek near Stratford, WI | 11.3 | 1976-79 |
| 05400000 | Wisconsin River at Knowlton, WI | 4,520 | 1920-42 |
| 05400500 | Plover River near Stevens Point, WI | 136 | 1914-19, 1944-51 |
| 05400600 | Little Plover River near Arnott, WI | 1.5 | 1959-75 |
| 05400840 | Fourmile Creek near Kellner, WI | 51 | 1964-67 |
| 05400853 | Buena Vista Creek near Kellner, WI | 44 | 1964-67 |
| 05401020 | Tenmile Creek Ditch 5 near Bancroft, WI | 8.8 | 1964-73 |
| 05401050 | Tenmile Creek near Nekoosa, WI | 73.3 | 1963-79 |
| 05401100 | Fourteenmile Creek near New Rome, WI | 91.9 | 1964-79 |
| 05401500 | Wisconsin River near Necedah, WI | 5,860 | 1902-14, 1944-50 |
| 05401510 | Big Roche a Cri Creek near Hancock, WI | 9.5 | 1963-67 |
| 05401535 | Big Roche a Cri Creek near Adams, WI | 52.8 | 1963-78 |
| 05402500 | Yellow River at Sprague, WI | 420 | 1926-40 |
| 05403000 | Yellow River at Necedah, WI | 526 | 1940-57 |
| 05403630 | Hulbert Creek near Wisconsin Dells, WI | 11.2 | 1970-77 |
| 05403700 | Dell Creek near Lake Delton, WI | 44.9 | 1957-1965, 1970-80 |
| 05404200 | Narrows Creek at Loganville, WI | 40.0 | 1964-66 |
| 05406000 | Wisconsin River at Prairie du Sac, WI | 8,950 | 1946-53 |
| 05406573 | Trout Creek at Confluence with Arneson Creek near Barneveld, WI | 8.37 | 1975-79 |
| 05406574 | Trout Creek at Twin Parks Dam 8 nr Barneveld, WI | 9.02 | 1975-79 |
| 05406575 | Trout Creek at County Highway T nr Barneveld, WI | 12.1 | 1975-79 |
| 05406577 | Trout Creek near Ridgeway, WI | 13.5 | 1975-79 |

| Station number | Station name | Drainage area (sq mi) | Period of record |
|---|---|---|---|
| 05406590 | Knight Hollow Creek near Arena, WI | 7.57 | 1976-77 |
| 05406640 | Otter Creek near Highland, WI | 16.6 | 1968-69, 1970-75 |
| 05407500 | Kickapoo River at Ontario, WI | 151 | 1938-39, 1973-77 |
| 05408500 | Knapp Creek near Bloomingdale, WI | 8.47 | 1954-69 |
| 05409000 | West Fork Kickapoo River near Readstown, WI | 106 | 1938-39 |
| 05409500 | Kickapoo River at Soldiers Grove, WI | 530 | 1938-39 |
| 05409830 | North Fork Nederlo Creek near Gays Mills, WI | 2.21 | 1967-79 |
| 05409890 | Nederlo Creek near Gays Mills, WI | 9.46 | 1967-80 |
| 05410000 | Kickapoo River at Gays Mills, WI | 617 | 1913-34, 1964-77 |
| 05413400 | Pigeon Creek near Lancaster, WI | 6.81 | 1964-66 |
| 05414894 | Pats Creek near Belmont, WI | 5.42 | 1980-82 |
| 05414915 | Madden Branch Tributary near Belmont, WI | 2.83 | 1980-82 |
| 05414920 | Madden Branch near Meekers Grove, WI | 15.1 | 1980-82 |
| 05418731 | Apple River near Shullsburg, WI | 9.34 | 1980-82 |
| 05423000 | West Branch Rock River near Waupun, WI | 40.7 | 1949-70, 1978-81 |
| 05423100 | West Branch Rock River at County Trunk Highway D near Waupun, WI | 43.9 | 1978-81 |
| 05423500 | South Branch Rock River at Waupun, WI | 62.8 | 1948-69 |
| 05424000 | East Branch Rock River near Mayville, WI | 179 | 1949-70 |
| 05424082 | Rock River at Hustisford, WI | 511 | 1978-85 |
| 05425537 | Johnson Creek near Johnson Creek, WI | 1.13 | 1978-79 |
| 05425539 | Johnson Creek near Johnson Creek, WI | 13.3 | 1978-79 |
| 05425928 | Pratt Creek near Juneau, WI | 3.54 | 1978-80 |
| 05426500 | Whitewater Creek near Whitewater, WI | 7.2 | 1926-28, 1946-54 |
| 05426900 | Whitewater Creek at Millis Road near Whitewater, WI | 20.6 | 1978-81 |
| 05427000 | Whitewater Creek at Whitewater, WI | 22.7 | 1926-28, 1946-54 |
| 05427507 | Koshkonong Creek near Rockdale, WI | 150 | 1976-82 |
| 05427718 | Yahara River at Windsor, WI | 73.6 | 1976-81 |
| 05427800 | Token Creek near Madison, WI | 24.3 | 1975-80 |
| 05427900 | Sixmile Creek near Waunakee, WI | 41.1 | 1976-81 |
| 05427943 | Pheasant Branch at Airport Road near Middleton, WI | 9.61 | 1977-81 |
| 05427945 | South Fork Pheasant Branch at Highway 14 near Middleton, WI | 5.74 | 1977-81 |
| 05427950 | Pheasant Branch at Century Avenue at Middleton, WI | 20.8 | 1977-81 |
| 05427952 | Pheasant Branch at mouth at Middleton, WI | 24.5 | 1978-81 |
| 05427970 | Willow Creek at Madison, WI | 3.15 | 1973-83 |
| 05428665 | Olbrich Park Storm Ditch at Madison, WI | 2.57 | 1976-80 |
| 05429040 | Manitou Way Storm Sewer at Madison, WI | 0.22 | 1970-77 |
| 05429050 | Nakoma Storm Sewer at Madison, WI | 2.35 | 1971-77 |
| 05429118 | Lake Wingra at Madison, WI | 6.08 | 1970-79 |
| 05429120 | Lake Wingra Outlet at Madison, WI | 6.08 | 1970-77 |
| 05429580 | Door Creek near Cottage Grove, WI | 15.3 | 1975-79 |
| 05430000 | Yahara River near Edgerton, WI | 459 | 1916-17 |
| 05430030 | Oregon Branch at Oregon, WI | 9.93 | 1979-81 |
| 05430100 | Badfish Creek near Stoughton, WI | 43.5 | 1956-66 |
| 05431500 | Turtle Creek near Clinton, WI | 202 | 1939-79 |
| 05433500 | Yellowstone River near Blanchardville, WI | 28.5 | 1954-65, 1977-79 |
| 05434000 | Pecatonica River at Dill, WI | 951 | 1914-19 |
| 05433510 | Steiner Branch near Waldwick, WI | 5.9 | 1977-79 |
| 05434235 | Skinner Creek at Skinner Hollow Road near Monroe, WI | 32.6 | 1978-81 |
| 05434240 | Skinner Creek at Klondyke Road near Monroe, WI | 35.0 | 1978-81 |
| 05435980 | West Branch Sugar River near Mount Vernon, WI | 32.7 | 1979-80 |
| 05436000 | Mount Vernon Creek near Mount Vernon, WI | 16.4 | 1954-65, 1975-80 |
| 05545300 | White River near Burlington, WI | 110 | 1973-82 |

# WISCONSIN DISTRICT PUBLICATIONS

The reports listed below are a partial list of reports prepared by the Wisconsin District in cooperation with other agencies since 1948. The list contains reports that are relevant and contribute significantly to understanding the hydrology of Wisconsin's water resources.

The reports published in a U.S. Geological Survey series are for sale by the U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices can be obtained by writing to the above address or by calling (303)236-7476. Copies of reports published by the University of Wisconsin, Geological and Natural History Survey, can be obtained from their office at 3817 Mineral Point Road, Madison, WI 53705.

## WATER-SUPPLY PAPERS

Batten, W.G., and Hindall, S.M., 1980, Sediment deposition in the White River Reservoir, northwestern Wisconsin: U.S. Geological Survey Water-Supply Paper 2069, 30 p.

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October 1, 1978

## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

| Multiply inch-pound units | By | To obtain SI units |
|---|---|---|
| | *Length* | |
| inches (in) | $2.54\times10^{1}$ | millimeters (mm) |
| | $2.54\times10^{-2}$ | meters (m) |
| feet (ft) | $3.048\times10^{-1}$ | meters (m) |
| miles (mi) | $1.609\times10^{0}$ | kilometers (km) |
| | *Area* | |
| acres | $4.047\times10^{3}$ | square meters ($m^2$) |
| | $4.047\times10^{-1}$ | square hectometers ($hm^2$) |
| | $4.047\times10^{-3}$ | square kilometers ($km^2$) |
| square miles ($mi^2$) | $2.590\times10^{0}$ | square kilometers ($km^2$) |
| | *Volume* | |
| gallons (gal) | $3.785\times10^{0}$ | liters (L) |
| | $3.785\times10^{0}$ | cubic decimeters ($dm^3$) |
| | $3.785\times10^{-3}$ | cubic meters ($m^3$) |
| million gallons | $3.785\times10^{3}$ | cubic meters ($m^3$) |
| | $3.785\times10^{-3}$ | cubic hectometers ($hm^3$) |
| cubic feet ($ft^3$) | $2.832\times10^{1}$ | cubic decimeters ($dm^3$) |
| | $2.832\times10^{-2}$ | cubic meters ($m^3$) |
| cfs-days | $2.447\times10^{3}$ | cubic meters ($m^3$) |
| | $2.447\times10^{-3}$ | cubic hectometers ($hm^3$) |
| acre-feet (acre-ft) | $1.233\times10^{3}$ | cubic meters ($m^3$) |
| | $1.233\times10^{-3}$ | cubic hectometers ($hm^3$) |
| | $1.233\times10^{-6}$ | cubic kilometers ($km^3$) |
| | *Flow* | |
| cubic feet per second ($ft^3/s$) | $2.832\times10^{1}$ | liters per second (L/s) |
| | $2.832\times10^{1}$ | cubic decimeters per second ($dm^3/s$) |
| | $2.832\times10^{-2}$ | cubic meters per second ($m^3/s$) |
| gallons per minute (gal/min) | $6.309\times10^{-2}$ | liters per second (L/s) |
| | $6.309\times10^{-2}$ | cubic decimeters per second ($dm^3/s$) |
| | $6.309\times10^{-5}$ | cubic meters per second ($m^3/s$) |
| million gallons per day | $4.381\times10^{1}$ | cubic decimeters per second ($dm^3/s$) |
| | $4.381\times10^{-2}$ | cubic meters per second ($m^3/s$) |
| | *Mass* | |
| tons (short) | $9.072\times10^{-1}$ | megagrams (Mg) or metric tons |

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